

GENERAL LIBRARY
AUG 12 1918
UNIV. OF MICH.

Railway Age

SECOND HALF OF 1918—No. 6.

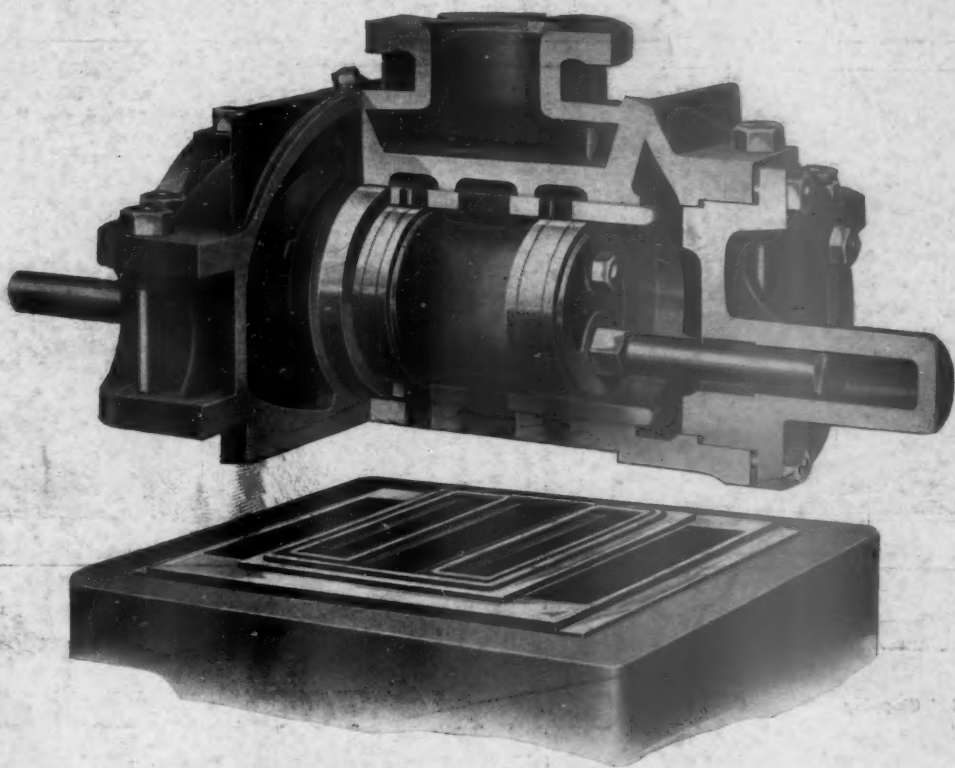
SIXTY-THIRD YEAR

NEW YORK: WOOLWORTH BLDG.
CHICAGO: Transportation Bldg.

NEW YORK—AUGUST 9, 1918—CHICAGO

CLEVELAND: Citizens Bldg.
WASHINGTON: Home Life Bldg.

Entered as second-class matter at the post office at New York, N. Y., under the act of March 3, 1879.
Published Weekly. Subscription Price, United States and Mexico, \$5.00 a year; Canada, \$6.00; foreign countries (excepting daily editions), \$8.00.



Note the ease of application. The wire joint means a tight joint.

PISTON VALVES ON OLD CYLINDERS

Renewing slide valve cylinders merely to get piston valves is an extravagant waste of labor and material.

Universal Valve Chests make piston valve cylinders by replacing the old slide valves. They fit on top of the old slide valve seat.

They render new cylinders and frame ends unnecessary.

This saves 21,500 lbs. of material and much labor.

But what is of still greater importance—they quicken up the whole job and render possible converting many more engines before this next winter.

Franklin Railway Supply Company, Inc.



The long-wearing, rich-appearing upholstery material—inexpensive and distinctive.

L. C. CHASE & CO., Boston
NEW YORK DETROIT CHICAGO

The standard upholstery for over a third of a century—grades for all uses.

CHASE
Goat Brand Car Plush



Specify BUCKEYE JACKS

and be assured that you are getting the best jack in design, capacity and longevity that is manufactured

Send for Catalogue

BUCKEYE JACK MFG. CO. ALLIANCE OHIO

OPEN HEARTH STEEL LOCOMOTIVE PASSENGER AND FREIGHT SERVICE



SMOOTH FORGED OR ROUGH TURNED

J. R. JOHNSON & CO.

EST'D 1866

EASTERN SALES AGENTS
ATKINSON & UTECH, INC.
111 BROADWAY, NEW YORK

RICHMOND, VA.



No. 3S "Little David" Chipping Hammer



No. 2 "Little David" Non-Reversible Drill



No. 90 "Little-David" Long Stroke Riveting Hammer with Safety Retainer



No. 3SC "Little David" Reversible Drill



No. 7 "Little David" Grinder

COUNT THE COST OF YOUR AIR TOOL MAINTENANCE

You can't afford excessively frequent part replacements. Not only are repairs expensive, but the idle time represents a money loss.

"Little David" Pneumatic Tools Eliminate Trouble

They are so simple in design and so well built of high grade material that they show a remarkable ability to stand up and deliver continuous service in spite of rough and ready handling.

Drop forgings are used wherever possible, wearing and bearing surfaces are given special hardening treatments and then accurately ground. Ball and roller bearings are long lived and contribute much to minimize friction. Gears are drop forgings with cut (not cast) teeth.

These are but a few of the features which enable "Little David" Tools to do more work at less cost than has been possible in the past.

You will want to know more about these tools. Ask us to send you the complete "Little David" Catalog.

INGERSOLL-RAND COMPANY

11 Broadway, New York

Offices the World Over

165 Q. Victoria Street, London

Sometimes — Lightning Trouble Starts in the Track Circuit



YOU can protect your track transformers and resistance units from induced potentials by using

G-E Vacuum Arresters

3500 Vacuum arrester tubes on the division illustrated were recently tested, showing less than 5% renewals required after one to five years' service.

And the low cost of renewals is a minor item compared to the service reliability obtained by roads equipped with arresters of the

G-E Vacuum Type

General Electric Company

General Office



Schenectady, N. Y.

Sales Offices in All Large Cities

Railway Age

Vol. 65

August 9, 1918

No. 6



Colored Engineers on Railroad Work in the Marne Section. Photo Copyright by Press Illustrating Service

Contents

Interesting Reconstruction Work on the Erie Page 248

Completion of This Line Between Griffith and Lomax Will Give the Erie Double Track Operation from New York to Chicago.

Organization of the Southwestern Railway Region 255

This Region Combines Lines and Parts of Lines in the Southwest where Operating Conditions Have Been Difficult and State Regulation Particularly Short Sighted.

Doings of the Railroad Administration 259

Amounts Advanced to Pay Wages. Property Protection Showing Results.

EDITORIALS

A Complete Victory for Labor.....	243
Good Advice to Critics of Railways.....	243
Hanging it on the Railroads.....	243
Looking Down on a Freight Terminal.....	243
Better Air Brake Maintenance Will Save Fuel.....	244
Damaging Equipment Helps the Kaiser.....	244
Reducing Maintenance Costs.....	244
The Causes of Increases in Operating Expenses.....	245
Increasing Locomotive Capacity	246
Delaware & Hudson.....	246

GENERAL ARTICLES

Interesting Reconstruction Work on the Erie.....	248
Save Coal By Reducing the Train Line Leaks.....	252

GENERAL ARTICLES—Continued

The Recent Increases in Wages of Shopmen.....	253
Organization of the Southwestern Railway Region.....	255
Freight Operations in May.....	257
Doings of the United States Railroad Administration.....	259
Results of Signal Department Reorganization on Rock Island; J. Arthur Hoffmann.....	262
Inland Traffic Division of War Department Expanded.....	263
High Capacity Cars on a Narrow Gauge Railway in India; Frederick C. Coleman.....	265
Railway Supplies and Commissions.....	266
Orders of Regional Directors.....	267
Meeting of Railway Claim Agents.....	268
Special Meeting of Short Line Association.....	269

GENERAL NEWS SECTION.....271

Alphabetical Index to Advertisements, page 5. Directory of Advertisers, page 6.

Published every Friday and daily eight times in June by the

Simmons-Boardman Publishing Company, Woolworth Building, New York

EDWARD A. SIMMONS, Pres. L. B. SHERMAN, Vice-Pres. HENRY LEE, Vice-Pres. & Treas. M. H. WIUM, Secretary.

CHICAGO: Transportation Building.

CLEVELAND: Citizens Building.

WASHINGTON: Home Life Building.

Editorial Staff

SAMUEL O. DUNN, Editor.

ROY V. WRIGHT, Managing Editor.

W. E. HOOPER
E. T. HOWSON
B. B. ADAMS
H. F. LANE
R. E. THAYER

C. B. PECK
W. S. LACHER
J. G. LITTLE
A. F. STUEBING
C. W. FOSS
K. E. KELLENBERGER

A. G. OEHLER
F. W. KRAEGER
G. L. LACHER
E. L. WOODWARD
B. W. MEISEL

Entered at the Post Office at New York, N. Y., as mail matter of the second class.

The Railway Age is a member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.)

Subscriptions, including 52 regular weekly issues and special daily editions published from time to time in New York, or in places other than New York, payable in advance and postage free: United States and Mexico, \$5.00; Canada, \$6.00; Foreign Countries (excepting daily editions), \$8.00; single copies, 15 cents each.

WE GUARANTEE, that of this issue 8,000 copies were printed; that of these 8,000 copies 6,820 were mailed to regular paid subscribers, 174 were provided for counter and news companies' sales, 291 were mailed to advertisers, 434 were mailed to exchanges and correspondents, and 281 were provided for new subscriptions, samples, copies lost in the mail and office use; that the total copies printed this year to date were 292,742, an average of 9,148 copies a week.

EDITORIAL

Railway Age

With the approval by the director general of the recent increases in the wages for shop men, labor has scored another victory. The Railroad Administration in giving the shop craftsmen a minimum of 68 cents an hour places the railroad mechanic in the plutocrat class of working man. This pay to rail-

A Complete Victory for Labor

way shop men is better than that paid the ship builders (who are considered the best paid mechanics) for several reasons. While there may be higher rates in the shipbuilding industry, the men have to work harder and longer hours, they have not congenial living conditions and their work is somewhat dependent upon the weather. In December, 1915, the date on which the Railroad Wage Commission based its calculations, the railroad mechanic received a rate varying between 32 and 38 cents an hour. He now receives 68 cents an hour as a minimum. The first part of this year a canvass of 21 roads showed that at that time the railroad mechanic's hourly wage varied between 44½ and 56 cents per hour. Taking 52 cents as a fair average, his wage has therefore been increased over 30 per cent this year. Our railroads should not now find it difficult to hold their shop forces!

It is so easy to criticize the railways; so easy to tell how they should be operated and to back up such statements

Good Advice to Critics of Railways

with all sorts of statistics, good, bad and indifferent—that is, it is easy to do so from a comfortable arm-chair miles and miles away from the actual operations, from the dirt and grime and grind of the daily detail operations. It would be a good thing if some of those who are long on the theories of railway operation, management and regulation could take a few days off occasionally, and not simply visit or inspect a railroad, but really get into the spirit of its every-day operation. What a treat it would be to get an honest confession from such a one. It might parallel the following sentences taken from the letter of a friendly critic—indeed, there would undoubtedly be more friendly and less unfriendly critics than there are at the present time: "I think that all of us started with very interesting theories, many of which had to be discarded as we went along. I know that I had to 'unlearn' a lot of things that looked like gospel, once upon a time, and I suppose that many others have had the same experience. I recall, in particular, one assignment that required visits to a number of engine terminals. Conversations with master mechanics, roundhouse foremen and others right down to the wipers, together with observation of the handling and assignment of power and minor repairs to it, woke me up in a hurry. I believe that contact with the hard facts of everyday railroading gives a man a breadth of view and tolerance of general attitude that is beneficial to one and gratifying to his friends, neighbors and associates. It is, therefore, with the greatest sincerity and best of feeling that I recommend this course to any critic of the railways who is acquainted with even the rudiments of the business. After he has 'washed up' and had a good night's sleep—he will need both—he will return to his desk with an inspiration before him that will last for many a day. It is this occa-

sional contact with realities that has helped to preserve my enthusiasm and sustain my interest in the great industry that is so close to the hearts of us all."

A number of magazines are publishing notices in current issues requesting subscribers to be patient in case their

Hanging It on the Railroads

copies do not arrive in time and adding the explanation that "it is probably because railroad traffic, congested by war needs has delayed it. Please wait a few days before you write us." This is not only an unwarranted indictment of the Railroad Administration and the officers and employees of the roads, but an attempt to shift the responsibility for this delay from the shoulders upon which it rightly belongs. The railroads at present are dealing with a traffic that is enormous as compared to pre-war times, but except in restricted localities congestion does not exist. Mail trains may be frequently delayed a few minutes and occasionally several hours, but even under the trying blockades of last winter they were very rarely "days" behind schedule. Therefore if mail is often delivered one or more days late the delays to mail trains will account for but an insignificant portion of the lost time. Why should not the readers of current periodicals be appraised of the real cause of delays in their mail, i. e., the policy of the Post-Office Department, under which reduced working forces and inadequate car space are used on mail trains and (what is not common knowledge) much second-class matter is sent by freight. The Western Union Telegraph Company recently was heavily fined for sending telegraph messages by train. The postal deficit would be greatly increased if the department were fined every time delays to mail now occur due to the general policy being followed by the present incompetent management of the department.

The observation balloons—or "sausages," as they are more familiarly called—are giving excellent service on the other

Looking Down On a Freight Terminal

side by helping to keep our forces posted as to the movements of the enemy and assisting the gunners to reach the vital points. The suggestion has been made that the erection of a high tower in the center of a large freight terminal with an observer stationed on top of it, having telephone connection to the yardmaster's office, would result in a startling increase in yard efficiency and capacity. The movements of the switching crews could be followed and studied, and avoidable delays and lost motion could be located and eliminated. Bad practices could be corrected and the yardmaster would have his vision broadened to consider the operation of the yard as a whole, instead of continually focusing his attention on small parts of the work and having his vision obscured in whole, or in part, as to the larger aspects of the game. You may smile at the suggestion; it may seem wholly impracticable, and yet this must be accomplished in effect if the best and most efficient results are to be obtained. The real solution to the problem is to so control and adjust the human element or the human rela-

tionships that each man in the organization will be keyed up to study his work and its relation to the movements of others, eliminating all superfluous movements and unnecessary expenditure of energy. This is no small task, and yet it must be tackled promptly and energetically if the railroads are to make good in the emergency that now confronts them. The restricted capacity of the freight terminals is one of the limiting factors in the amount of traffic that can be handled. It is therefore strictly up to those in charge of these terminals to speed up the work and get enthusiastic and intelligent co-operation from every member of the organization. Fix a goal toward which to strive and inspire your men to reach it!

Six millions tons of fuel are required annually to maintain train line leakage on the freight trains operated in the United States. This striking fact was brought out by a committee appointed by the Air Brake Association to co-operate with the fuel conservation section of the Railroad Administration in devising

**Better Air Brake
Maintenance
Will Save Fuel**

measures to reduce locomotive fuel consumption. When considered in relation to the total amount of coal used by the railroads annually this waste loses its significance, as it represents not more than three or four per cent of this total. Considered by itself, however, the possibilities for saving which it represents are great enough to offer a magnificent return for all the energy required to reduce it to a practicable minimum. At \$2.50 per ton of coal the loss amounts to \$15,000,000. Through its co-operation with the Fuel Conservation Section, the Air Brake Association has performed a real national service in focussing the attention of railroad men throughout the country and in all departments of the service on the existing conditions, and in suggesting definite measures which should be taken to reduce this waste. The measures are simple. The real problem lies in putting them into universal practice. A number of the suggestions involve the correction of evil practices which are of long standing and have consistently defied all previous efforts which have been made toward their correction. The opportunity presented to the Fuel Conservation Section is a great one and in the hands of the strong national organization such as this is, the prospects of securing results are better than ever before. The fact should not be overlooked that the advantages which will accrue from the consistent application of these suggestions are by no means confined to the saving of fuel. Train line leakage is a most serious obstacle to satisfactory brake operation, especially in long freight trains, and some of the most potent causes of excessive train line leakage also result in excessive deterioration of other parts of the equipment. Successful efforts to reduce the waste of fuel incident to excessive train line leakage will also result in improvement in train operation as well as in the general condition of rolling stock.

Freight yard facilities are crowded to the limit in these days and there is great need for energetic measures to get the

**Damaging Equip-
ment Helps
the Kaiser**

greatest possible service from them. Nothing can be gained, however, and much may be lost, by putting the cars over the hump without riders or by rushing the work beyond the point where it can be properly done. Consider, for instance, the statement of the Southern regional director to the effect that the number of cars damaged in yard switching service in his district had increased from 7,625 for the week ending May 4 to 15,265 for the week ending June 1. Undoubtedly the switching crews felt that they were making a big record in rushing the cars through the

yards; in reality delays caused by later handling of the damaged equipment not only entirely offset this apparent gain, but resulted in a distinct loss compared with slower and more careful switching movements. Unfortunately this was only the beginning of a chain of delays and expense, which, if it could be presented to the crews in the form of an itemized bill at the end of each day's work, would startle them. In many instances the lading was damaged; this will result not only in claims for loss and damage, but in disappointment and delay to the consignees and their clients. In some cases the damage might even be irreparable, particularly in these days of scarcity of materials. The equipment itself might have to lie idle for days, at a time when the needs of the nation and our allies require that it be in service every possible moment. Doubling the number of damaged cars in the above case required the services of hundreds of extra car repairmen and yet it is practically impossible to maintain the car repair forces even at their normal strength in these days. A low estimate for the time lost by the additional cars out of service would amount to thousands—yes, hundreds of thousands—of dollars. The issuing of orders or circulars will be helpful, but the real solution of the problem is an immediate, enthusiastic and aggressive campaign of education to emphasize the seriousness of such damage, which is often the result of either excessive zeal or thoughtlessness. There may be disloyal men who are responsible for some of it. If so, their fellow workmen should hunt them out and hand them over to the federal authorities. Damaging a car or interfering with the efficiency of the transportation machine during time of war is just as much an offense and may have just as serious results as going to sleep on duty at the front, and yet the latter offense is punishable by death.

Reducing Maintenance Costs

ANY PLAN that can reduce the cost of maintenance is worthy of consideration by the officers of the railroads. Measures tried out and found successful on one road may contain information of interest for other lines similarly situated.

In 1915 the Chicago, Rock Island & Pacific reorganized its signal department by lengthening the territory assigned to signal maintainers, this being accomplished by furnishing the signalmen with motor cars. Under the new organization the maintainers were assigned helpers who were also provided with motor cars. The territory assigned to a maintainer prior to the reorganization was on single track 12 to 15 miles and on double track 20 miles. This was increased to 35 miles for single track and 28 miles for double track.

A saving of approximately \$23,700 per annum has been effected through the use of the motor car. In addition an intangible economy has been effected on which it would be hard to place a value in dollars and cents, for since the use of the motor cars, signal failures have been cleared up with less delay to trains than perhaps was accomplished formerly.

Any plan that may be developed for reducing maintenance costs will be of little or no benefit if the reduction is made at the cost of efficiency, but an arrangement that will increase efficiency and at the same time provide for the education of new men, as worked out on the Rock Island, is constructive. An article covering the reorganization on the Rock Island appears elsewhere in this issue.

It would seem that other departments having occasion to use track cars could apply a similar arrangement to advantage, but before motor cars are used extensively the men who will use them should be instructed thoroughly as to their proper operation, otherwise an increase in accidents may occur.

The Causes of Increases in Operating Expenses

THE ENORMOUS increases which are occurring in railway expenses are beginning to attract nation-wide attention. The Railroad Administration directed that the general wage increases granted since January 1, excepting those to the shop employees made by the recent order of the director general, should be included in the reports of operating expenses for June. The reports of individual roads regarding their earnings and expenses in June are now being made public and of course they show enormous additions to expenses.

In an editorial in its issue of July 26 the *Railway Age* said: "It would appear that even in the absence of any general advance in wages the increase in operating expenses in 1918 would be around \$600,000,000." Apparently there is no reason for revising this estimate unless it should be revised upward. The actual increase in operating expenses reported by the Interstate Commerce Commission in the first five months of the year was \$262,000,000. This did not include any general advance in wages. The original general advance granted by the director general and the supplementary advance recently granted by him to the shop employees will amount to at least \$35,000,000 a month. These wage advances, added to the other increases in operating expenses will make the total increase in the operating expenses during the first five months of the year about \$437,000,000. At this rate the increase in expenses during the first six months of the year will be approximately \$520,000,000 and in the entire year \$1,400,000,000.

Never in the history of the railways of the United States did there occur any increase in expenses which even approached this. In fact, it would appear that never before in any entire year was the increase in expenses as large as it was in the first six months of 1918. In the highly prosperous year 1910 the increase in expenses over 1909 was \$225,000,000. In the record-breaking year 1916 the increase over 1915 was \$190,000,000. In the calendar year 1917, when the advances in expenses were coming so fast that both the railway managements and government officers saw that many, if not most, of the railway companies would be reduced to bankruptcy unless unprecedented measures were adopted to save them, the total increase in expenses was about \$475,000,000.

These enormous increases in expenses will, and should, become a subject of keen interest and great concern to the railway companies, the Railroad Administration and the public. If the railways are to be returned to private management it is desirable from the standpoint of the companies that no effort shall be spared while the roads are in the hands of the government to keep down expenses, because the higher the expenses are when the roads are returned to them the more difficult the problem of the companies will be. It is extremely important to the Railroad Administration to hold down expenses, because, of course, the director general and his lieutenants desire to be able to give a good account of their stewardship, and efficiency in operation consists not merely in rendering good service, but in rendering it as economically as may be practicable in the circumstances. The question of railway expenses deeply concerns the public, because at the present time the public is burdened with taxes levied to carry on the war, and every increase in such expenses means the imposition of an additional burden upon the public either in the form of higher railway rates or higher taxes.

What, then, are the causes of these enormous increases in expenses? They are not largely due to an increase in the amount of business handled, since the increase in business handled thus far during the present year has been small. They are very largely due to advances in wages and

in the prices of fuel and materials; but there were also large advances in wages and prices in 1916 and 1917, especially the latter year. The Railroad Wage Commission has shown that the advance in wages in 1917 over 1915, due entirely to advances in the rates of pay, was \$350,000,000. That the advances in the unit costs of labor, fuel and materials in 1918 have been greater than in 1917 is beyond question. On the other hand the increase in the amount of traffic handled in 1918 has thus far been less than it was in 1917. On the whole, therefore, it would appear, in the absence of opportunity for a thorough investigation, that in proportion to the increase in business handled and to the advances in unit costs, the increase in operating expenses during the first six months of 1918 under government operation has been, not only absolutely, but relatively much greater than it was in the first six months of 1917 under private operation; and this in spite of the fact that the government has had opportunity to operate the railways without all the hampering restrictions which federal and state laws imposed upon operation when it was conducted by private companies. If this conclusion is correct—and we have no doubt that a thorough investigation would sustain it—the question arises—and it is a very important question—as to why the increase in expenses has been relatively greater than heretofore. Is it due to government operation? If so, wherein has government operation failed?

Every intelligent person now recognizes the fact that at the end of 1917 it had become necessary for the government to come to the rescue of the railway companies. The government chose to guarantee the returns of the companies and to take the operation of their properties out of their hands. It is now clear that if government operation was to be adopted it was necessary to put some non-railroad man representing the national administration in charge. If any railroad man had been appointed director general he would long ere this have been torn to pieces by shippers, the press and the public. Since, as we can now clearly see, it was desirable to put a public man in charge, it is safe to say that President Wilson could not have selected a better man than Mr. McAdoo. Mr. McAdoo undoubtedly has made mistakes, some of them great ones, but there are certain far greater mistakes which a man in his position might have made, but which he has not made. He has not made the mistake of putting incompetent or inexperienced men in important positions. On the contrary, he has put in almost all important positions men who are eminently fitted for them by experience and ability. He has not made the mistake of showing want of courage. If he has shown courage to do some things which are open to criticism, he has also shown the courage in most cases to hold the politicians at arm's length, and he has made advances in rates which are larger than any railway man would have dared to make, but which experience is rapidly showing are not larger than are needed. So far as moving business is concerned, the railways undoubtedly are being efficiently operated.

If, in case government operation was to be adopted, Mr. McAdoo was the right man to make director general, and if he has selected most of his lieutenants wisely, and if political interference with the railroads has been kept at the minimum possible under government operation, what reason is there, if any, in addition to the advances in unit costs, why operating expenses are so greatly increasing? We believe there is another reason of great importance, and that it ought to be obvious to anybody who has closely followed developments in the railway field. That reason is that on the day government operation was adopted the principal incentive to economical operation was destroyed. Private companies operate railways for profit. Governments ordinarily do not. The profits—or losses—of the companies depended very largely on how economically their properties

were operated, and every officer of a company knew that his future depended largely on his success in getting good results at a low cost. Consequently, when the roads were taken over, every operating officer was exerting himself to the utmost, not only to handle all the business possible, but to handle it at the least expense possible.

Under government operation, on the other hand, while as much stress as ever has been put on the need for handling the maximum amount of business, comparatively little stress has been put on economy, except as it might be secured by unified operation, standardization, etc. Now, systems and formulas are valueless as means of keeping down and reducing expenses in any business unless the entire personnel of the organization, and especially the official personnel, is kept driving constantly to keep them down and reduce them. Here, as elsewhere, the human element is the vitally important element; and in our opinion one of the principal causes of the increases in railway operating expenses, if not the principal cause, is that the human element is not taking the intense interest in expenses that it formerly did.

But is this condition to be remedied? Doubtless the Railroad Administration can partly remedy it by making a special "drive" on the subject of expenses. But it can be only partially remedied under government operation. It is an inevitable feature of government operation that it largely destroys the incentive to economy. A large increase in operating expenses has occurred on every system of railways the operation of which has ever been assumed by any government, whether in war or peace. Such an increase should have been foreseen in this country, and it was foreseen by everybody except persons of a socialistic tendency. Our railways will never again be operated relatively as economically as they were under private management until they are restored to private management, with its despised incentive to try to save money in order to make a profit or avoid losses. Government operation and minimum economy in operation always have been incompatible, and always will be, simply because governments cannot afford the same incentives to their officers and employees to economize that private companies not only can and do, but must, if they are to prosper.

Increasing Locomotive Capacity

IT IS UNDERSTOOD that the Railroad Administration is negotiating with the locomotive builders to add considerably to their output for the year 1919. The delay in building the standard locomotives which have been ordered by the government, aggravated by the need of sending 500 locomotives to General Pershing without delay, has made it necessary to study next year's building program critically. The special effort that is being made to get the power now in service into good condition for the fall and winter months, when the traffic will be greatly increased, is a move in the right direction. There is a serious question as to whether it would not be wiser to plan on going still further in this direction and at the same time improving the performance of the locomotives now in service, thus virtually increasing the number of locomotives, rather than to try to get the builders to increase the capacity of their plants next year. It is becoming more and more apparent each day that neither steel nor skilled mechanics should be used on other than absolutely essential work. Operating the railroads is essential, but in the interests of winning the war it will be advisable to get greater service from our present locomotives, rather than to plan on increasing the production of new locomotives beyond a reasonable point.

A time study of the movements of a locomotive today ought to make even as inanimate and hardened object as a locomotive blush for shame. In many cases the locomotives could be run over two or three divisions with the same train,

by simply changing the crews and cleaning the fires at the division points. This has been tried and has proved a success, and yet the practice is not being extended nearly as rapidly as it should be. Enginehouse methods and practices and facilities should be thoroughly gone over, so that the power can be maintained in first-class condition. One of the most expensive practices is that which overlooks wear and tear and allows them to develop to a point where they must be remedied if the power is to be kept in service. It is well known that those roads which watch their power most closely and keep it in the best condition from day to day are those whose unit costs for maintenance are the lowest.

Co-operation is such a hackneyed expression that we hesitate to use it because it has largely lost its force. What is most greatly needed, however, to improve locomotive performance is 100 per cent co-operation between the mechanical and the operating departments and between various elements in the operating department. It is ridiculous, for instance, to call several engines for a certain time and needlessly rush the engine house forces when there is no possibility of having more than one crew ready at that time. A locomotive also deteriorates rapidly lying idle under steam at a terminal or on a side track, and will waste a large amount of coal. If the yard-masters, despatchers and division superintendents will get out of the rut and study and strive as a unit to make the best possible use of each locomotive, every minute of the time, it would undoubtedly result in an increased capacity of the locomotives now in service to such a degree that it would be possible to get along with the normal number of new locomotives which can be supplied by the builders until the emergency is past.

Delaware & Hudson

A BANKER who has been a close student of present tendencies of railroad investments remarked recently that the only attractive railroad stocks were coal company stocks. Some of the railroad companies did remarkably well in 1917 in their earnings from railroad operation purely and simply. Most of these roads, however, were in the west, and, as the banker quoted above implied, the eastern railroad companies which has had good net earnings in 1917 and which now look attractive as stock investments are those with some other sources of income than purely operation as a railroad company. The Delaware & Hudson is such a railroad company. In 1917 more than a third of the income of the company came from sources other than railway operation. Net railway operating income amounted to \$5,644,000 in 1917, comparing with \$7,782,000 in 1916. Income from other sources amounted to \$4,790,000, comparing with \$2,396,000 in 1916. The gross income, therefore, available for interest and dividends was a little better in 1917 than in 1916, amounting to \$10,434,000. In 1917, after the payment of interest and rentals, there was equivalent to 11.75 per cent remaining available for dividends. The company pays 9 per cent and in 1916 had only 9.78 per cent available for dividends.

Up to the issuance of the 1917 annual report, the income account furnished stockholders showed separately the operations of the coal mining department and the railroad department. The 1917 annual report, however, contains only the income account arranged in accordance with the form prescribed by the Interstate Commerce Commission, which form does not show the separate operations of the coal mining department. However, under miscellaneous income the Delaware & Hudson received \$2,713,000 in 1917 as against \$127,000 in 1916. Since, however, the operating income of the coal mining department was \$123,000, as shown in the 1916 annual report, comparing with \$127,000 miscellaneous income in 1916, as shown by the 1917 annual

report, it may be assumed that the greater part of this miscellaneous income is net revenue from coal mining. The Delaware & Hudson carries on its balance sheet its unmined coal owned and controlled at \$17,810,000, but this is not a measure of the value of the coal mining department of the Delaware & Hudson. This might be more truly approximated by capitalizing the income received from this source in 1917 which would put a capital value of approximately \$40,000,000 on this asset of the company.

The costs of mining coal increased greatly. Miners' wages were advanced 25 per cent, and contract miners' wages were advanced 30 per cent. Some other classes of labor received even greater advances and at the close of

increase is almost entirely accounted for by the increase in revenue from hauling coal. The revenue from the transportation of coal amounted to \$14,807,000 in 1917, an increase over 1916 of \$3,038,000. In 1916 the Interstate Commerce Commission ordered a reduction in rates on anthracite and this reduced the 1917 revenues from the transportation of coal to the Delaware & Hudson Company by \$448,000 as compared with the revenue which would have been obtained under the higher rate. In March, 1918, the commission permitted increases in freight rates, including rates on anthracite, but none of the benefits of this increase are reflected in the 1917 annual report.

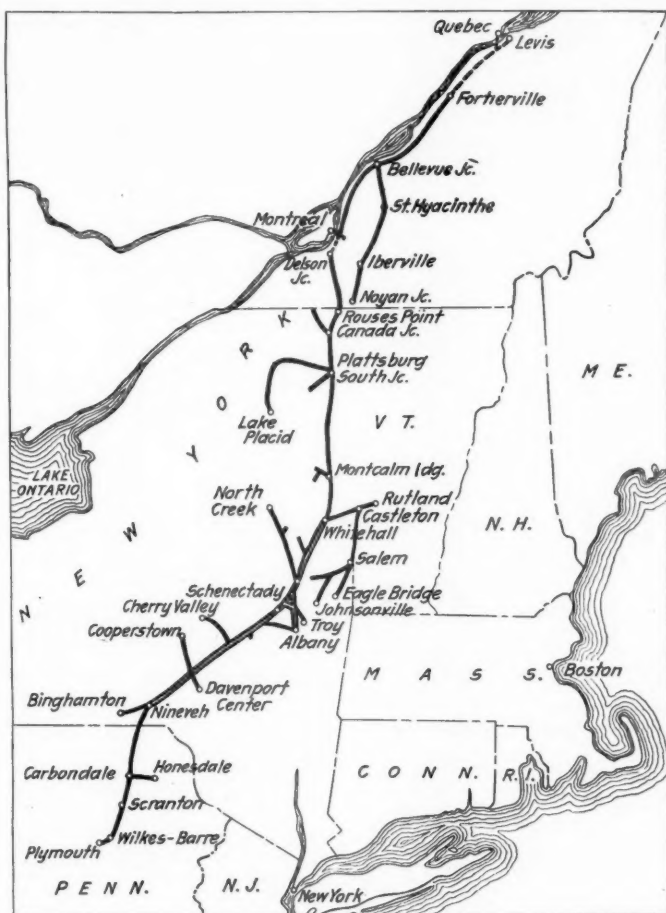
The increase of \$3,355,000 in revenue was much more than offset by an increase of \$5,339,000 in expenses; total operating expenses amounting in 1917 to \$23,450,000. Increases in the amount spent for maintenance of equipment and in transportation (out-of-pocket cost of moving the business) are principally responsible for the increases in expenses. Maintenance of way and structures cost \$2,522,000 in 1917, an increase of only \$394,000; while maintenance of equipment cost \$6,662,000, an increase of \$1,691,000, and transportation expenses amounted to \$12,746,000 in 1917, an increase of \$3,232,000. The cost of fuel increased out of proportion even to the increases in costs of other materials and of labor. Fuel for freight train locomotives in 1917 cost \$3,846,000 or \$1,601,000 more than the cost in 1916. In the case of the Delaware & Hudson, however, this does not represent a complete loss to the stockholders since a part of the increased cost for fuel is paid by the railroad department to the coal mining department and some of it is returned to the company in the form of miscellaneous income.

In 1917 the Delaware & Hudson carried 27,017,000 tons of freight, comparing with 24,506,000 carried in 1916. Of this 67.62 per cent was products of mines in 1917, and 63.34 per cent was products of mines in 1916. The average length of haul was 159 miles for each ton, an increase of a little less than 7 miles over 1916. The total ton mileage of revenue freight in 1917 was 3,954,000,000, an increase of 468,000,000 or 13.5 per cent. The freight train mileage totalled 5,289,000, an increase of 148,000 or 2.9 per cent. The average train load was 748 tons, an increase over the previous year of 69 tons, and the average number of tons per loaded car was 31.48 in 1917, an increase of 3.59 tons. Both the increase in train loading and in car loading are remarkably good.

During 1917 the Delaware & Hudson sold \$9,000,000 5 per cent three-year secured notes due August 1, 1920, and with the proceeds paid off the \$5,000,000 first mortgage bonds which matured in 1917. At the end of the year the company had \$1,204,000 loans and bills payable, comparing with \$3,204,000 loans and bills payable at the end of 1916, and had \$1,904,000 cash on hand, comparing with \$1,166,000 cash on hand at the end of 1916. During the year the company spent for additions and betterments to both road and equipment and charged to capital account \$2,542,000. One of the principal items of expenditure was on the enlargement of the yard at Carbondale and the completion of the new general office building at Albany.

The following table shows the principal figures for operation in 1917 as compared with 1916:

	1917.	1916.
Mileage operated	909	909
Merchandise freight revenue	\$10,540,757	\$10,254,653
Coal freight revenue	14,806,606	11,769,005
Total operating revenue	29,989,399	26,634,426
Maintenance of way and structures	2,521,969	2,127,853
Maintenance of equipment	6,662,232	4,970,920
Traffic expenses	325,898	341,580
Transportation expenses	12,746,189	9,513,925
General expenses	1,074,076	957,518
Total operating expenses	23,449,953	18,111,095
Taxes	891,616	738,659
Operating income	5,644,353	7,781,928
Gross income	10,434,081	10,177,856
Net income	4,992,780	4,158,372
Dividends	3,835,270	3,835,270
Surplus	1,157,510	323,102



The Delaware & Hudson

1917 wage rates were 35 per cent higher than those in effect in the same period in 1916. In fixing the price of coal the government has quite properly taken into consideration the increased cost of production. The anthracite coal produced by the Delaware & Hudson in 1917 was 8,644,000 tons, an increase of over 20 per cent over 1916. Since maintenance of steady output is a large factor in the holding down of costs in coal mining, the greatly increased total year's production of the Delaware & Hudson indicates a much better condition in the coal mining department in 1917 than in 1916. Apparently the coal miners have readjusted themselves to the shorter hours of labor for their helpers, and, although it was necessary to use extraordinary efforts to retain at the mines a sufficient number of workers, it would appear that the Delaware & Hudson quite successfully made such efforts. As President L. F. Loree says, "Scarcity of labor and unprecedented need of heavier production are principal characteristics" with the production and sale of anthracite at present.

In the railroad department the company earned \$29,989,000 in 1917 or \$3,355,000 more than in 1916. This



Steam Shovel in the Summit Cut

Interesting Reconstruction Work on the Erie

A 35-Mile Section of Double Track Line in Indiana
Includes Some Heavy Grade Revision

IN ACCORDANCE with a general program for the improvement of its entire main line from New York to Chicago, which has been under way ever since F. D. Underwood was made president of the road in 1902, the Erie is now completing the construction of second track between Lomax, Ind., and Griffith, a distance of 35 miles. This is the last gap in the double tracking undertaken in 1913 between Marion, Ohio, and Chicago, a distance of 269 miles, and except for a few miles of single track in New York state,

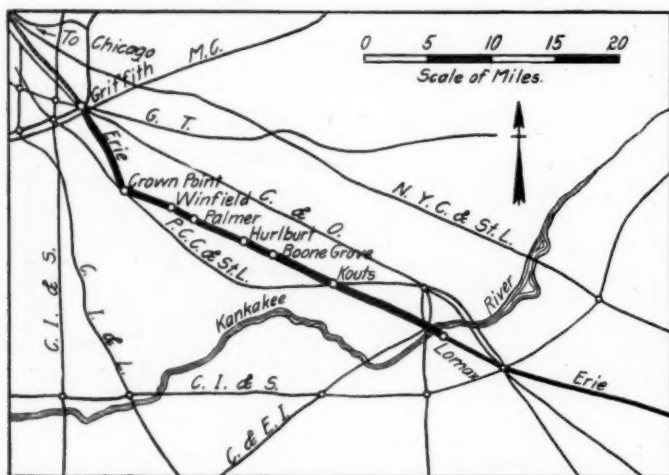
a capacity of 100 cars, instead of 85 cars as on the earlier work.

The construction work which was relatively heavy, considering the country traversed, was carried on under the heavy traffic conditions prevailing during the last two years. Contrary to common practice the work assigned to the general contractor included not only the grading and all bridge work except the erection of the steel, but also the ballasting, track laying and surfacing. The entire improvement represents an expenditure of something over \$2,000,000.

The Marion division of the Erie extends from Marion, Ohio, 248.7 miles west to Hammond, Ind., from which point the trains continue into Chicago over the tracks of the Chicago & Western Indiana. In general the traffic has consisted of a total of 12 first-class trains (including one 12-car eastbound express train and three 10-car westbound express trains) and about 12 freight trains eastbound and 11 westbound. About one-half of the eastbound freight trains and 30 per cent of the westbound freight trains are time freight.

The tonnage hauled over this line has been heavy. For example, in one month during 1917 the net tons of freight hauled one mile on the Marion division amounted to 96,647,329 westbound, and 66,496,564 eastbound. In this same month the average net tons per train was 962, while the record monthly average is 1,007 tons. This record is particularly favorable in view of the fact that relatively light engines were being used on this division, the heaviest locomotive being a superheater Consolidation weighing 200,700 lb. with 176,400 lb. on the drivers and a drawbar pull of 29,968 lb. on a 0.2 per cent grade, and 29,630 lb. on a 0.3 per cent grade.

Since the completion of the second track and improvement work as far west as Lomax several years ago the engines for the tonnage trains have been rated for ruling grades of 0.2 per cent westbound and 0.3 per cent east bound, with pushers for both the eastbound and the westbound 0.5 per cent grades between Lomax and Griffith. The loading of the engines for the time freights has been such that they could haul their trains over the 0.5 per cent grades without assistance. The pusher service has required the use of one west-

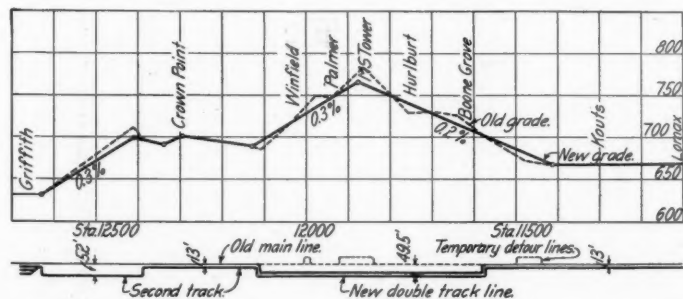


Map of Erie Between Griffith and Lomax, Ind.

the completion of this work will give the Erie double-track operation all the way from New York to Chicago.

The work now nearly finished involves a reduction of grades from 0.5 per cent in each direction to 0.2 per cent westbound and 0.3 per cent eastbound for the Marion division, these being the ruling grades established when the reconstruction work previously carried out on this division was started. A single departure from the standards established for the work previously completed on the Marion division consists in the provision for passing tracks having

bound and one eastbound pusher engine and three crews, and an average of 10 trains in each direction have been assisted over the grades. With the completion of the work now in progress, this pusher service is being done away with and since the mileage for the eastbound pusher engine was 24



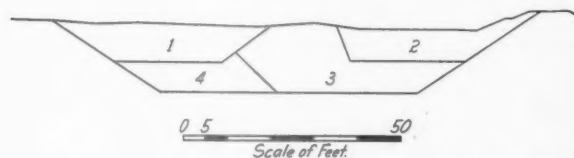
Condensed Profile of the District on Which Reconstruction Work Was Done

miles for each train assisted and for the westbound pusher 11 miles, a total daily pusher mileage of about 350 miles will be eliminated.

Physical Characteristics

The location of the 35-mile section between Griffith, Ind., and Lomax consists essentially of a climb over a summit at MS Tower, which is located about midway in the section and is about 120 ft. higher than the track at Griffith and 90 ft. higher than Lomax. However, only about one-half of the distance is embraced in the approach grades to this summit. There is a 12-mile stretch of practically level track at the

grade were required except to make a ballast raise, and the second track in consequence was placed on the south side of the old line at 13-ft. centers. The grade revision at the summit necessitated a lowering of the grade line 20-ft. with a continuous 0.3 per cent approach grade from the west for a distance of $4\frac{3}{4}$ miles and a 0.2 per cent approach grade from the east for $8\frac{3}{4}$ miles. Besides this difference of 20-ft. in the elevation of the two grade lines at the summit there were other places where the new grade line is from 10-ft. to 12-ft. higher or lower than the old one, and it was decided in consequence to build a new double track line on an offset of $49\frac{1}{2}$ -ft. south from the center line of the old track for a



Typical Progress Sections of the Summit Cut

distance of 11 miles, the old line being abandoned after the new one was completed. From Griffith east the old line makes a climb of four miles on a 0.5 per cent grade to an intermediate summit about two miles west of Crown Point. In the reconstruction, a second or eastbound track was put in on a 0.3 per cent grade, leaving the old track for westbound trains. As this plan implied a material difference



A Blanket of Earth 10 ft. Thick Was Used to Counterweight One of the Fills

east end and one of five miles in the vicinity of Crown Point about half way up the west approach to the summit. These 17 miles consist almost entirely of light work, most of the heavy work being on the approach grades.

The alignment is tangent throughout except for a curve at Crown Point and one at Kouts, the former being a 1-deg. 50-min. curve with a total angle of 45 deg. In consequence no change of alignment was made in revising the grades except as it was found desirable to offset the new center lines as determined by the construction procedure.

On the two-level portions of the district no changes of

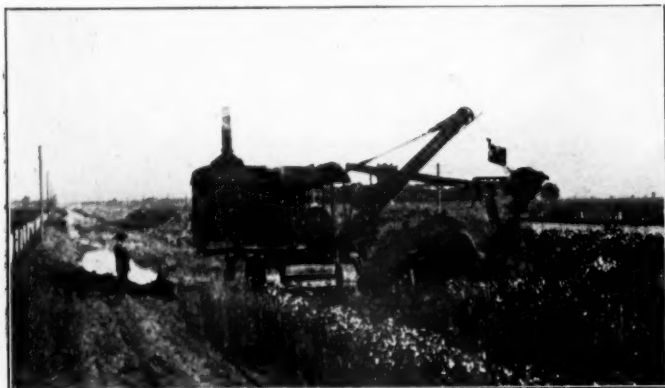
in the elevation of the two tracks in some places the second track was constructed 52-ft. south of the old center line.

Construction Methods

The construction work involved moving about 1,200,000 cu. yd. of earth. The grade line provided for a reasonable balance of excavation and embankment, although involving some long hauls on account of the preponderance of excavation for several miles each side of the summit. Some borrow was required for the yard excavation at Griffith, and at the east end where the work consisted very largely of a low em-

bankment for the second track adjacent to the old one the new fill was formed from borrow pits alongside. The Robert Grace Contracting Company, Pittsburgh, had the general contract and carried on nearly all of the work with its own forces, except for the side borrow work mentioned above and a small amount of work near the west end of the section, both of which were sublet to F. J. Mann, Wauwatosa, Wis.

The heavy work included a summit cut containing a total of 450,000 cu. yd., one near Palmer containing 137,000 cu. yd., one at Boone Grove of 22,000 cu. yd. and one west of Crown Point containing 104,000 cu. yd. There are fills



Revolving Shovel Making an Embankment from Side Borrow

of 131,000 cu. yd. and 207,000 cu. yd. west and east of the summit cut respectively, and one of 204,000 cu. yd. at the foot of the west approach grade.

At MS Tower the top width of the excavation was so great that it was necessary to throw the operated main track several feet to the north for a distance of 8,000 ft. entailing an excavation of 19,000 cu. yd. and a fill of 16,000 cu. yd. Of the total material in the M.S. cut, 200,000 cu. yd. was moved west and 250,000 cu. yd. east. A 70-ton and a 75-ton shovel were used in this cut, one working from each end. In the west end 4-yd. dump cars on a 36-in. gage track were used in 12-car trains handled by dinky locomotives. At the



Loading Wagons With a Revolving Shovel

east end, standard-gage equipment was used, eighty 12-yd. Western dump cars being provided to haul the material. Of this material 207,000 cu. yd. was placed in a fill near Hurlburt within a distance of 3 miles, and about 25,000 cu. yd. was hauled east over the main line for a distance of 16 miles to be used in embankments.

The diagram illustrates a typical section of the summit cut and shows the manner in which the material was removed in the successive passages of the shovel. By taking independent cuts on each side of the center line with a portion

between untouched it was possible to operate the material cars on a ground surface track for a considerable time before shifting to a location in the cut.

The cut at Palmer is 2500 ft. long and has a maximum depth of 32 ft. All of the material from this point was moved west with standard gage 12-yd. dump cars handled in 12-car trains a maximum distance of four miles. In the 100,000 cu. yd. cut on the Griffith hill two 60-ton and one 70-ton steam shovels were used with narrow-gage hauling equipment.

One of the most interesting features of the work was the borrow pit excavation made by the sub-contractor, involving a total of 130,000 cu. yd. placed in embankments from 5 ft. to 7 ft. high formed from a borrow pit alongside. Two 20-ton Bucyrus revolving shovels were used, each equipped with $\frac{7}{8}$ -cu. yd. buckets, one on a 15-ft. boom and the other on a 12-ft. boom. One of the shovels made an average of 600 cu. yd. per day with a record of 750 cu. yd. per 10-hour shift for nearly one month. As the embankment formed by this method was rather rough, a considerable amount of dressing by hand and teams was required, but even including the cost of this work, the embankment was formed with considerable economy over other methods suggested. One of the



A Crack Six Feet Wide in Heaving Peat Near Griffith

illustration shows an 18-ton shovel of the revolving type used by the same contractor to handle 38,000 cu. yd. of material taken from a borrow pit west of Crown Point for the embankment approaches to an overhead highway crossing. The material was hauled by seven teams and dump wagons.

Special Features

The construction season was more than ordinarily dry and the contractor experienced no difficulty with wet cuts, although the drainage of some of the longer ones had to be carried as much as $1\frac{3}{4}$ miles in side ditches. In fact, considerable expense was incurred because of a lack of water, since it was necessary to haul that required for the contractor's locomotives and steam shovels from beyond the limits of the construction district for a considerable portion of the season.

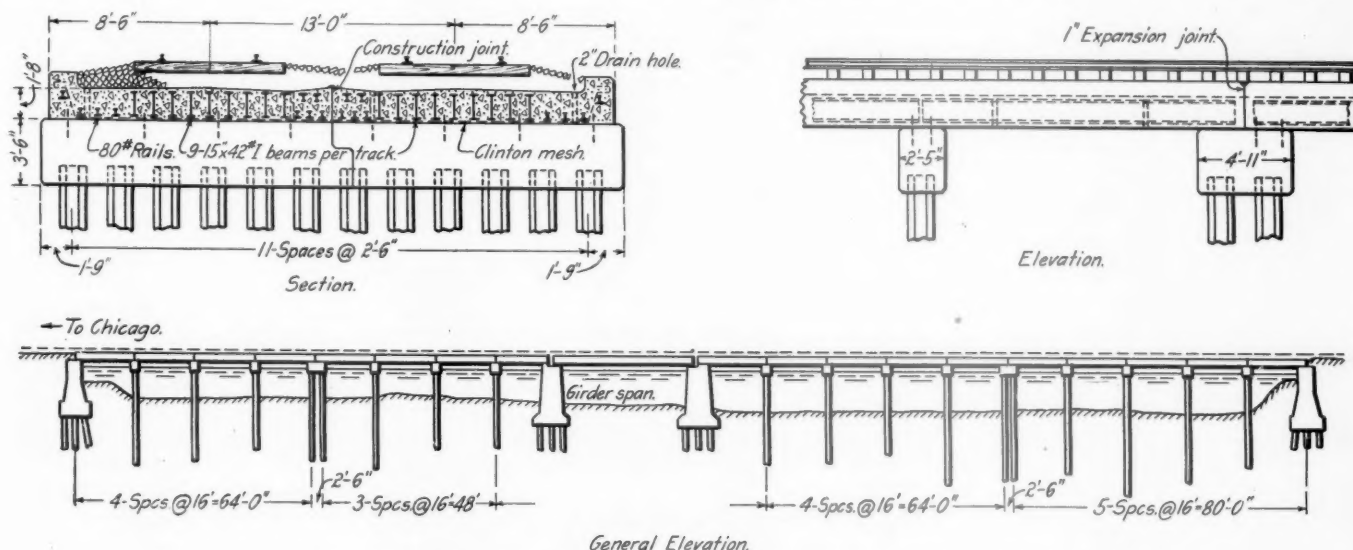
Soft foundations were the source of considerable expense in two of the embankments, although experience with the

embankments for the original track made it possible to institute preparatory measures which resulted in savings, although not entirely eliminating the difficulties. The weight of the old embankment just east of Palmer had resulted in marked upheavals of the ground on either side, with accompanying settlements of the roadbed, and this action had been a source of considerable trouble when the original track was constructed. With this knowledge the ground on the low side of the new embankment was counter weighted with a layer of earth about 10-ft. thick and extending out a distance of 50 ft. from the toe of the embankment. This is shown in one of the photographs. In spite of these precautions considerable settlement took place.

Near Griffith a sink hole was encountered where the embankment rested on a soft black peat which settled heavily under the weight of the new fill and produced a swell or wave about 100 ft. from the track. This reached the height of 15 ft., actually higher than the unfinished embankment and broke into large fragments with fissures 6 ft. or more in width and depth as shown in one of the photographs.

Structures

The bridge work on the line is relatively light and aside from bridges over two channels of the Kankakee river near



Elevation and Typical Details of One of the Kankakee River Bridges

Lomax they consist of I-beam and rail spans encased in concrete, arch and pipe culverts, several highway over-crossings, one under-crossing and a few girder spans over small streams. The masonry work involved a total of 12,884 cu. yd. of concrete.

The highway over-crossings consist of plate girder spans directly over the tracks, supported on concrete bents or steel columns on low concrete pedestals with approach spans on either side over the slopes of the cuts. These approach spans consist of reinforced concrete slabs in most cases and the abutments are mainly of the skeleton type set in the top of the slope.

The two Kankakee river bridges are reinforced concrete pile trestles, consisting respectively of eighteen and ten 16-ft. panels of concrete slabs, with the addition, in the longer structure, of a skew through girder span 58 ft. face to face of piers, which was provided to permit the ready passage of dredges used in drainage work. The trestle slabs consist of nine 15-in. 42-lb. I-beams placed directly under the track ties with a number of T-rails in the portions of the slabs between the tracks and outside of them, all steel being encased in concrete. No other reinforcing is provided, except a layer of Clinton welded wire fabric which is spread below

the bottom flanges of the beams and extends up into the parapets on each side.

The bents consist of pre-cast concrete piles capped with a reinforced concrete girder built in place. There are 12 piles to each bent. Owing to the necessity of maintaining traffic on the original timber trestle during the construction of the new bridge, constructive joints were made in the caps on the center line between tracks. Under the plan of construction adopted, the slabs were cast in place on the bents and were secured rigidly in position in groups of four or five by four one-in. dowel bars per track extending into the slabs and the caps. Expansion joints were provided on one end of each group of four or five slabs and in cases where this expansion joint does not come on one of the abutments or masonry piers a double concrete pile bent was provided, consisting of two rows of piles covered by a wide cap. These double bents also provide additional rigidity in the structure.

The piles are 25 ft. long, octagonal in shape, 16 in. on the short diameter, and were driven by a No. 1 Vulcan 5-ton steam hammer. The driving was difficult and the best day's work was eight piles. A number of piles had to be cut off because they could not be driven to the pre-determined penetration. A No. 3 Union Iron Works steam hammer was employed to drive the sheet piling used for the cofferdams for

the pier and abutment foundations which were supported on timber piles. The abutments are of the pier type to permit the ready extension of the concrete trestles in either direction should it subsequently be found necessary to provide additional waterway. In order to cast the slabs in place and to maintain traffic during construction it was necessary to complete the second track side of the bridge first, and as soon as this could take traffic, train operation was shifted to it while the side of the bridge to carry the original track was completed.

Track Standards

The new track is laid with 100-lb A. R. A. Type A rail, which is used also in all the crossovers in the old line. Side tracks are laid with 90-lb. relay rail. Zinc-treated red oak ties 8½ ft. long are laid 18 to a 33-ft. rail in main tracks, and 8 ft. long laid 16 to the rail in side tracks. Joints are slot spiked, with anti-creepers on the opposite ends of the joint ties. Additional rail anchors are provided in track approaching stations, interlocking plants and the entrances to sidings. Stone ballast is used to a depth of 1 ft. below the bottoms of the ties, 220,000 cu. yd. being provided in all for this work. The roadbed standards provide for a base width

on embankments of 19 ft. for single track and 32 ft. for double track; the base width in cuts is 27 ft. for single track and 40 ft. for double track, except where extra large ditches are required. Double passing sidings are provided at intervals and located in most places away from towns to avoid blocking the streets with standing trains. Each siding is 4,725 ft. long over-all and will hold a 100-car train.

This work has been carried on under the direct supervision of C. R. Hughes, district engineer, Huntington, Ind., with M. W. Manz, W. A. Scott and F. E. Welsh as resident engineers. The entire work was under the direction of R. S. Parsons, chief engineer, and R. C. Falconer, assistant chief engineer.

Save Coal by Reducing the Train Line Leaks

A LETTER, addressed to Eugene McAuliffe, manager of the fuel conservation section of the division of operation, United States Railroad Administration, was drafted by a committee of 27 members of the Air Brake Association, in which are contained a number of concrete recommendations for reducing train pipe leakage and thereby effecting a material saving in locomotive fuel consumption. These recommendations were drafted at a meeting of the Air Brake Association committee, held in Chicago on July 31, and were presented at a meeting of railroad officers convened by Mr. McAuliffe in Chicago the following day, to consider measures for fuel conservation.

The letter is as follows:

Realizing our country's present urgent need of fuel saving to the highest degree, and being actuated by a patriotic desire to be genuinely useful in its particular way, the Air Brake Association, through its president, F. J. Barry, has proffered its active assistance to the Railroad Administration's division on fuel conservation, of which you have been made the official head. Your acceptance of this assistance resulted in the convening of a special committee of supervising air brake men from 24 of the largest railroads of the United States. This committee's deliberations resulted in the consensus of opinion that its greatest and most needful help in fuel saving could be rendered through a materially decreased leakage in brake pipes on freight trains, which, according to careful expert estimate, is now the cause of a wastage of more than 6,000,000 tons of coal annually. This wastage can be materially cut down in the opinion of the Air Brake Association Committee quickly and with little additional cost, if the following recommendations be diligently and faithfully followed by the railroads and the government alike.

(1) In switching cars in hump yard service, hand brakes must be known to be in operative condition before dropping over the hump. Each cut should be ridden home and not be allowed to hit cars on make-up track at a speed exceeding three miles per hour, as excessive shocks result in loosened brake pipe and cylinder connections with attendant leakage at joints. Same conditions apply to general yard switching, and similar care should be exercised.

(2) When hose are uncoupled, they must be separated by hand and not pulled apart. Pulling hose apart is not only the most prolific cause of brake pipe leakage, but the damage annually due to train parting, account of hose blowing off nipples, also bursting, due to fiber stress, results in damage running into thousands of dollars. Angle cocks first must be closed if brake pipe is charged.

(3) Ample time must be allowed properly to inspect the air brakes and place them in good working order before leaving terminals.

(4) Freight terminals where conditions and business handled justifies, should be provided with a yard testing plant, piped to reach all outbound trains. At all freight houses, loading sheds, team tracks and other places where cars in quantity are spotted for any purpose long enough to make repairs and test brakes, air should be provided to do such work.

(5) On shop and repair tracks provided with air, brakes should be cleaned and tested in accordance with M. C. B. rules and instructions. Weather permitting, hose and pipe connections shall be given soapsuds test. Hose showing porosity shall be removed and all leaks eliminated before car is returned to service.

(6) Freight trains on arrival at terminals where inspectors are stationed to make immediate brake inspection and repairs, shall have slack stretched and left with brakes fully applied.

(7) Brake pipe leakage on outbound freight trains shall not exceed eight pounds per minute and preferably should not exceed five pounds per minute following a fifteen-pound service reduction from standard brake pipe pressure, with brake valve in lap position.

(8) A suitable pipe wrench should be furnished each caboose to enable trainmen to remove and replace hose and to tighten up leaks developing enroute. Instructions directing its use should be posted in each caboose.

(9) A rule should be put into effect that trainmen must apply an M. C. B. standard air brake defect card in cases where defects develop enroute, or for brakes cut out by them, defect to be checked off on back of card.

(10) Air compressor strainers must be known to be free of foreign matter before each trip and removed for cleaning if necessary. Steam pipe to compressor to be lagged outside of cab or jacket.

(11) Special effort must be made to reduce the leakage of the various air-operated devices on locomotives.

(12) In mounting air hose, the coupling should be gaged with an M. C. B. standard gage, and the couplings and coupling packing rings known to be standard.

(13) Special attention should be given to maintaining brake pipe, brake cylinder, reservoir, retaining valves and pipe secure to car.

(14) The importance of competent air brake supervision successfully to cope with existing conditions cannot be over estimated.

(15) In the recommendations submitted it is not the intent in any way to abrogate existing instructions or rules that are now in force that are more stringent than those recommended, as these recommendations are intended to represent maximum conditions.

The letter was signed by the members of the committee: L. P. Streeter, I. C., chairman; L. H. Albers, N. Y. C.; M. S. Belk, Sou. Ry. Lines; R. C. Burns, Penn. R.R.; H. A. Clark, Soo Line; H. A. Flynn, D. & H.; M. E. Hamilton, St. L.-S. F.; C. M. Kidd, N. & W.; Mark Purcell, N. P.; H. L. Sandhas, C. R. R. of N. J.; C. Terwilliger, N. Y., N. H. & H.; Robert Wark, No. Pac.; W. W. White, M. C.; L. S. Ayer, Sou. Pac.; J. A. Burke, Santa Fe; T. L. Burton, N. Y. C.; T. W. Dow, Erie; H. A. Glick, Bangor & Aroostook; E. Hartenstein, C. & A.; P. J. Langan, D. L. & W.; R. M. Long, P. & L. E.; C. H. Rawlings, D. & R. G.; H. S. Walton, Boston & Albany; C. H. Weaver, N. Y. C.; Geo. H. Wood, Santa Fe; H. F. Wood, Boston & Maine; F. M. Nellis, secretary.

KAISER ASKS SWEDISH AIR ROUTE.—The Germans have applied to the Swedish government for permission to establish an air route between Berlin and Stockholm, which may possibly be opened by a German company this summer, according to a consular report.

The Recent Increases in Wages of Shopmen

Supplement No. 4 to Order 27 Defines Trades, Names New Rates and Contains Statement by Mr. McAdoo

THE FULL TEXT of Supplement No. 4 to General Order No. 27 providing for additional increases to shopmen was given out in Washington on the afternoon of July 31, following its approval by the director general a week earlier, as briefly noted in the *Railway Age* of July 29, page 168. The supplement provides for increases to shopmen of nearly all classes, but a further increase is expected for some of the higher skilled trades which have hitherto enjoyed a differential, such as pattern makers, passenger car repair men, oxy-acetylene, thermit and electric welding, car repair work, etc. These trades have requested a further hearing and their case will be taken up before the Board of Railroad Wages and Working Conditions.

The full text of Supplement No. 4 follows:

In the matter of wages, hours, and other conditions of employment of employees in the mechanical departments (specified herein) of the railroads under Federal control it is hereby ordered:

ARTICLE I.—CLASSIFICATION OF EMPLOYEES.

SECTION 1.—*Machinists*.—Employees skilled in the laying out, fitting, adjusting, shaping, boring, slotting, milling, and grinding of metals used in building, assembling, maintaining, dismantling, and installing locomotives and engines (operated by steam or other power), pumps, cranes, hoists, elevators, pneumatic and hydraulic tools and machinery, scale building, shafting and other shop machinery; ratchet and other skilled drilling and reaming, tool and die making, tool grinding and machine grinding, axle, wheel and tire turning and boring; engine inspecting; air equipment, lubricator and injector work; removing, replacing, grinding, bolting and breaking of all joints on superheaters, oxy-acetylene, thermit and electric welding on work generally recognized as machinists' work; the operation of all machines used in such work, including drill presses and bolt threaders using a facing, boring or turning head or milling apparatus, and all other work generally recognized as machinists' work.

1-A.—*Machinist apprentices*.—Include regular and helper apprentices in connection with the above work.

1-B.—*Machinist helpers*.—Employees assigned to help machinists and apprentices. Operators of all drill presses and bolt threaders not equipped with a facing, boring or turning head or milling apparatus, bolt pointing and centering machines, wheel presses, bolt threaders, nut tappers and facers; cranesmen helpers, tool-room attendants, machinery oilers, box packers and oilers; the applying of couplings between engines and tenders, locomotive tender and draft rigging work, except when performed by carmen.

SECTION 2.—*Boilermakers*.—Employees skilled in laying out, cutting apart, building or repairing boilers, tanks and drums, inspecting, patching, riveting, chipping, caulking, flanging and flue work; building, repairing, removing and applying steel cabs and running boards; laying out and fitting up any sheet iron or sheet steel work made of 16 gage or heavier, including fronts and doors; grate and grate rigging, ash pans, front and netting and diaphragm work; engine tender steel underframe and steel tender truck frames, except where other mechanics perform this work; removing and applying all stay bolts, radials, flexible caps, sleeves, crown bolts, stay rods and braces in boilers, tanks and drums, applying and removing arch pipes; operating punches and shears for shaping and forming, pneumatic stay bolt breakers, air rams and hammers; bull, jam and yoke riveters; boilermakers' work in connection with the building and repairing of steam shovels, derricks, booms, housings, circles and coal buggies; eye beam, channel iron, angle iron and tee iron work; all drilling, cutting and tapping, and operating rolls in connection with boilermakers' work; oxy-acetylene, thermit and electric welding, on work generally recognized as boilermakers' work; and all other work generally recognized as boilermakers' work.

2-A.—*Boilermaker apprentices*.—Include regular and helper apprentices in connection with the above.

2-B.—*Boilermaker helpers*.—Employees assigned to help boilermakers and their apprentices. Operators of drill presses and bolt cutters in the boiler shop, punch and shear operators (cutting only bar stock and scrap).

SECTION 3.—*Blacksmiths*.—Employees skilled in welding, forging, shaping, and bending of metal; tool dressing and tempering; spring making, tempering, and repairing; potashing, case and bichloride hardening; flue welding under blacksmith foreman; operating furnaces, bulldozers, forging machines, drop-forging machines, bolt machines and Bradley hammers; hammersmiths, drop hammermen, trimmers, rolling mill operators; operating punches and shears doing shaping and forming in connection with blacksmiths' work; oxy-acetylene, thermit and electric welding on work generally recognized as blacksmiths' work.

3-A.—*Blacksmith apprentices*.—Include regular and helper apprentices in connection with the above.

3-B.—*Blacksmith helpers*.—Employees assigned to helping blacksmiths and apprentices; heaters, hammer operators, machine helpers, drill press and bolt-cutter operators, punch and shear operators (cutting only bar stock and scrap), in connection with blacksmiths' work.

SECTION 4.—*Sheet-metal workers*.—Sheet-metal workers shall include

tinners, coppersmiths and pipe fitters employed in shop yards and buildings and on passenger coaches and engines of all kinds, skilled in the building, erecting, assembling, installing, dismantling and maintaining parts made of sheet copper, brass, tin, zinc, white metal, lead and black planished and pickled iron of less than 16 gage, including brazing, soldering, tinning, leading and babbitting; the bending, fitting, cutting, threading, brazing, connecting and disconnecting of air, water, gas, oil and steam pipes; the operation of babbitt fires and pipe-threading machines; oxy-acetylene, thermit and electric welding on work generally recognized as sheet metal-workers' work, and all other work generally recognized as sheet metal workers' work.

4-A.—*Sheet metal worker apprentices*.—Include regular and helper apprentices in connection with the above.

4-B.—*Sheet metal worker helpers*.—Employees regularly assigned as helpers to assist sheet metal workers and apprentices.

SECTION 5.—*Electrical workers, first class*.—Employees skilled in repairing, rebuilding, installing, inspecting and maintaining the electric wiring of generators, switchboards, motors and controls, rheostats and control, static and rotary transformers, motor generators, electric head-lights and headlight generators; electric welding machines, storage batteries and axle lighting equipment; pole lines and supports for service wires and cables, catenary and monorail conductors and feed wires, overhead and underground winding armatures, fields, magnet coils, rotors, stators, transformers and starting compensators; all outside and inside wiring in shops, yards, and on steam and electric locomotives, passenger train and motor cars, and include wiremen, armature winders, switchboard operators, generators attendants, motor attendants, substation attendants, electric crane operators for cranes of 40 tons capacity or over; cable splicers, linemen and groundmen, signalmen and signal maintainers, where handling wires and apparatus carrying 240 volts or over, or in dense traffic zones, and all other work properly recognized as first-class electrical workers' work.

5-A.—*Electrical workers, second class*.—Operators of electric cranes of less than 40 tons capacity; linemen and groundmen, signalmen and signal maintainers, where handling wires and apparatus carrying less than 240 volts, and in normal traffic zones, and all other work properly recognized as second-class electrical workers' work.

5-B.—*Electrical worker apprentices*.—Include regular and helper apprentices in connection with the above.

5-C.—*Electrical worker helpers*.—Employees regularly assigned as helpers to assist electrical workers and apprentices, including electric lamp trimmers who do no mechanical work.

SECTION 6.—*Carmen*.—Employees skilled in the building, maintaining, dismantling, painting, upholstering, and inspecting of all passenger and freight train cars, both wood and steel; planing mill, cabinet and bench carpenter work, pattern and flask making, and all other carpenter work in shop and yards; carmen's work in building and repairing motor cars, lever cars, hand cars, and station trucks; building, repairing, removing, and applying locomotive cabs, pilots, pilot beams, running boards, foot and headlight boards, tender frames and trucks; pipe and inspection work in connection with air-brake equipment on freight cars; applying patented metal roofing; repairing steam-heat hose for locomotives and cars; operating punches and shears doing shaping and forming, hand forges and heating torches, in connection with carmen's work; painting, varnishing, surfacing, lettering, decorating, cutting of stencils and removing paint; all other work generally recognized as painters' work under the supervision of the locomotive and car departments; joint car inspectors, car inspectors, safety appliance, and train-car repairers, wrecking derrick engineers, and wheel-record keepers; oxy-acetylene, thermit, and electric welding on work generally recognized as carmen's work, and all other work generally recognized as carmen's work.

6-A.—*Carmen apprentices*.—Include regular and helper apprentices in connection with the above.

6-B.—*Carmen helpers*.—Employees regularly assigned to help carmen and apprentices; car oilers and packers, material carriers, and rivet heaters; operators of bolt threaders, nut tappers, drill-presses, and punch and shear operators (cutting only bar stock and scrap).

SECTION 7.—*Molders*.—Include molders, cupola tenders, and core makers.

7-A.—*Molder apprentices*.—Include regular and helper apprentices in connection with the above.

7-B.—*Molder helpers*.—Employees regularly assigned to help molders, cupola tenders, core makers and their apprentices.

ARTICLE II.—RATES AND METHOD OF APPLICATION.

SECTION 1. For the above classes of employees (except carmen, second-class electrical workers, and all apprentices and helpers), who have had four or more years' experience and who were on January 1, 1918, receiving less than 55 cents per hour, establish basic minimum rate of 55 cents per hour, and to this basic minimum rate and all other hourly rates of 55 cents per hour and above, in effect as of January 1, 1918, add 13 cents per hour, establishing a minimum rate of 68 cents per hour.

SECTION 1-A. For carmen and second-class electrical workers who have had four or more years' experience and who were on January 1, 1918, receiving less than 45 cents per hour, establish a basic minimum rate of 45 cents per hour, and to this minimum basic rate and all other hourly rates of 45 cents and above, in effect as of January 1, 1918, add 13 cents per hour, establishing a minimum rate of 58 cents per hour.

SECTION 1-B. Rates of compensation exceeding the minimum rates established herein to be preserved; the entering of employees in the service or the changing of their classification or work shall not operate to establish

a less favorable rate or condition of employment than herein established.

SECTION 1-C. The Director General recognizes that the minimum rates established herein may be exceeded in the case of men of exceptional skill, who are doing special high-grade work, which has heretofore enjoyed a differential. Such cases would include pattern makers, passenger car repair men, oxy-acetylene, thermit, and electric welding in car repair work, etc., and should be presented to the Board of Railroad Wages and Working Conditions for recommendation as provided in General Order No. 27.

SECTION 2. The above classes of employees (except carmen, second-class electrical workers, and all apprentices and helpers) who have had less than four years' experience in the work of their trade will be paid as follows:

- (a) One year's experience or less, 50 cents per hour.
- (b) Over one year and under two years' experience, 53 cents per hour.
- (c) Over two years' and under three years' experience, 57 cents per hour.
- (d) Over three years' and under four years' experience, 62 cents per hour.

SECTION 2-A. Carmen and second-class electrical workers who have had less than four years' experience in the work of their trade will be paid as follows:

- (a) One year's experience or less, 48½ cents per hour.
- (b) Over one year and under two years' experience, 50½ cents per hour.
- (c) Over two years' and under three years' experience, 52½ cents per hour.
- (d) Over three years' and under four years' experience, 54½ cents per hour.

SECTION 2-B. At the expiration of the four-year-period the employees mentioned in section 2 and section 2-A shall receive the respective minimum of their craft.

ARTICLE III.

SECTION 1. Regular apprentices between the ages of 16 and 21, engaging to serve a four-year apprenticeship, shall be paid at follows: Starting-out rate and for the first six months, 25 cents per hour, with an increase of 2½ cents per hour for each six months thereafter up to and including the first three years; 5 cents per hour increase for the first six months of the fourth year and 7½ cents per hour for the last six months of the fourth year.

SECTION 1-A. If retained in the service after the expiration of their apprenticeship, apprentices in the respective trades shall receive not less than the minimum rate established for their craft.

SECTION 2. Helpers in the basic trades herein specified will be paid 45 cents per hour.

SECTION 3. Helper apprentices will receive the minimum helper rate for the first six months, with an increase of 2 cents per hour for every six months thereafter until they have served three years.

SECTION 3-A. Fifty per cent of the apprentices may consist of helpers who have had not less than two consecutive years' experience in their respective trades in the shop on the division where advanced. In the machinist, sheet metal worker, electric and molder trades the age limit for advancement will be 25 years; in the boilermaker, blacksmith, and carmen trades 30 years.

SECTION 4. In the locomotive and car departments gang foremen or leaders and all men in minor supervisory capacity and paid on an hourly basis will receive 5 cents per hour above the rates provided for their respective crafts.

SECTION 5. The supervisory forces of the locomotive and car departments, paid on a monthly basis and exercising supervision over the skilled crafts, will be paid an increase of \$40 per month in addition to the monthly rate as of January 1, 1918, with a minimum of \$155 per month and a maximum of \$250 per month.

ARTICLE IV.—GENERAL APPLICATION.

SECTION 1. Each railroad will in payments to employees on and after July 1, 1918, include these increases therein.

SECTION 1-A. The increases in wages and the rates established herein shall be effective as of January 1, 1918, and are to be paid according to the time served to all who were then in the railroad service, or who have come into such service since, and remained therein. A proper ratable amount shall also be paid to those who for any reason since January 1, 1918, have been dismissed from the service, but shall not be paid to those who have left it voluntarily. Men who have left the railroad service to enter the military service of the Army or Navy shall be entitled to the pro rata increase accruing on their wages up to the time they left, and the same rule shall apply to those who have been transferred from one branch of the railroad service, or from one road, to another.

SECTION 2. The hourly rates named herein are for an eight-hour day, and one and one-half time will be paid for all overtime, including Sundays and the following holidays: New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving, and Christmas.

SECTION 3. While the specific rates per hour named herein will be retroactive to January 1, 1918, the special overtime provisions established in section 2 of this article will be effective as of August 1, 1918, with the provision that in computing overtime to determine back pay to January 1, 1918, overtime will be paid at a pro rata rate for all overtime worked in excess of the hours constituting the recognized day or night shift, except where higher overtime rate basis exists, or has been applied, in which event the more favorable condition shall be the basis of computing back pay accruing from this order.

SECTION 4. Employees, except monthly salaried employees, coming within the scope of this order, sent out on the road for emergency service, shall receive continuous time from the time called until their return as follows: Overtime rates for all overtime hours whether working, waiting, or traveling, and straight time for the recognized straight time hours at home stations, whether working, waiting, or traveling, except that after the first 24 hours, if the work is completed or they are relieved for 5 hours or more, such time shall not be paid for, provided that in no case shall an employee be paid for less than 8 hours on week days and 8 hours at one and one-half time for Sundays and holidays for each calendar day. Where meals and lodging are not provided by the railroad an allowance will be made for each meal or lodging. Employees will receive

allowance for expenses not later than the time when they are paid for the service rendered.

SECTION 5. Employees specified herein when sent from home point to temporarily fill vacancy or perform work at outside division points, will be paid straight time and overtime rates as per shop rules, including going and return trip, in addition to which they will be paid pro rata at the rate of \$2 per day for meals and lodging.

SECTION 6. Carmen stationed at points requiring only one employee on day shift or night shift, or day and night shifts, shall be paid eight hours at not less than the hourly rate provided herein.

SECTION 7. Mechanics now regularly assigned to perform road work and paid on a monthly basis shall be paid for eight hours at not less than the hourly rate provided herein.

SECTION 8. Employees on a piecework basis shall receive not less than the minimum rate per hour awarded to the hourly workers, including time and one-half for overtime, as hereinbefore provided; otherwise piecework rates provided in General Order No. 27 shall apply.

SECTION 9. The application of this order shall not, in any case, operate to establish a less favorable wage rate than in effect January 1, 1918.

ARTICLE V.—PAYMENTS FOR BACK TIME.

SECTION 1. As promptly as possible the amount due in back pay from January 1, 1918, in accordance with the provisions of this order, will be computed and payment made to the employees, separately from the regular monthly payments, so that employees will know the exact amount of these back payments.

SECTION 2. Recognizing the clerical work necessary to make these computations for back pay, and the probable delay before the entire period can be covered, each month, beginning with January, shall be computed as soon as practicable, and, as soon as completed, payments will be made.

ARTICLE VI.—INTERPRETATION OF THIS ORDER.

SECTION 1. Railway Board of Adjustment No. 2 is authorized by Article IX of General Order No. 27 to perform the following duty:

"Wages and hours, when fixed by the Director General, shall be incorporated into existing agreements on the several railroads, and should differences arise between the managements and the employees of any of the railroads as to such incorporation, such questions of difference shall be decided by the Railway Board of Adjustment No. 2 when properly presented, subject always to review by the Director General."

SECTION 2. In addition to the foregoing other questions arising as to the intent or application of this order in respect to the classes of employees within the scope of the Railway Board of Adjustment No. 2 shall be submitted to such board, which board shall investigate and report its recommendations to the Director General.

SECTION 3. All rates applied under this order shall be filed by the Regional Directors with the Board of Railroad Wages and Working Conditions.

SECTION 4. The rates, increases, and other conditions of employment herein established for the classes of employees herein specified shall supersede the rates, increases and other conditions established by General Order 27, except as provided in section 8, Article IV.

The concluding section of the supplement is a statement by Mr. McAdoo reading as follows:

In reaching the conclusions upon which this order is based, I have been keenly conscious not alone of the interests of the large number of railway employees who are greatly benefited thereby, but also of my solemn duty to the American people to see to it that the trust they have committed to me is discharged faithfully, with justice to them as well as to the railroad employees concerned. No right decision can be made which considers only the demands and interests of any class of men apart from the paramount interest of the public and the supreme necessity of winning this war.

Now that the decision has been made, the American people, whose servants we are, expect every railroad employee to devote himself with new energy to his work, and by faithful and efficient service, to justify the large increases of pay and the improvement in working conditions hereby granted. The American people have a right to expect this and they will be content with nothing less.

It is of the utmost importance that motive power and cars shall be kept in repair and that the output of railroad shops throughout the country shall be greatly increased in the future. Unless this is done, the railroads can not efficiently perform the increased duties imposed upon them by the war, and the fighting power of our armies in France and of our navies on the high seas will be seriously impaired.

I am proud of the loyal service the great body of railroad men throughout the country have rendered to their Government since the railroads have come under Federal control. It is a genuine pleasure to make this acknowledgment, but I should not fail to say at the same time that

there are instances where agitations and disturbances in some of the locomotive and car shops have been extremely hurtful to the country. The loyal and patriotic employees, who constitute the great majority of the army of railroad workers, have not yielded, be it said to their credit and honor, to these disturbances. But the few who have, have done their country a grievous injury by impairing the efficiency and reducing the output of the shops where these disturbances have occurred.

The loyal and patriotic employees can render a new

and powerful service to their country by using their influence to expose any who may become slackers in their work, by co-operating with their officers in the enforcement of discipline, and by increasing, to the utmost limit of their capacity, the output of locomotives and cars which are so essential to the efficient operation of the railroads of the country and to the success of our armies in the field. I know I can count on the patriotism and devotion to duty of every true American engaged in the railway service of the United States.



B. F. Bush,
Southwestern Regional Director



W. B. Bidde, Traffic Assistant to
Southwestern Regional Director.



E. A. Hadley, Engineering Assistant
to Southwestern Regional Director



F. G. Pettibone
District Director of Lines in Texas

Organization of the Southwestern Railway Region

The Economic Character of the Territory; the Mileage, Equipment and Revenues of the Railways

THE SOUTHWESTERN RAILROAD REGION which was created recently when the Western region was divided into three parts, includes railroads operating from 35,000 to 40,000 miles of line. Although the various regions overlap to some extent by virtue of the control of lines which penetrate other territories, the Southwestern region consists approximately of the southern half of the state of Missouri, southeastern Kansas, most of Oklahoma, Louisiana west of the Mississippi river, most of Texas and all of the state of Arkansas. The area of this region is about 430,000 square miles, making it third in size among the railroad operating territories, it being exceeded in extent of territory by the Central Western and the Northwestern regions.

Some of the roads in the Southwest are in the hands of receivers and others have recently emerged from receivership. Among those in the hands of receivers are the Texas & Pacific, the Missouri, Kansas & Texas lines and the International & Great Northern, while those which recently have emerged from receiverships include the Missouri Pacific, the St. Louis-San Francisco, the Gulf Coast Lines, and the Rock Island Lines. Not having received compensation for service rendered, as a result of their inability to secure authority to increase their rates to reasonable figures, the southwestern lines are not as well equipped or as well maintained as those in other parts of the country. In fact, there is no strong trunk line in this entire region comparable with those in the two other western regions. This condition is no reflection on the ability of the officers who have directed the affairs of the railways, but is the inevitable result of the

short-sighted and rigorous policy pursued for a long time by the states through which the roads run.

The Southwestern region has few large cities and little manufacturing except in the centers near or on its borders. The principal war materials produced by it are oil, timber and cotton. In addition, considerable grain for shipment abroad passes through the territory, but most of this originates in the states north and northwest of the region.

Ever since the friction with Mexico a few years ago, the Southwest, and particularly the state of Texas, has been the scene of much military activity. The region contains more training camps and military posts of various kinds than the other two western territories, and probably ranks second only to the Southern region in this regard, if it does not surpass that section of the country. The transportation of troops to and from these camps has, of course, added considerably to the passenger traffic of southwestern lines.

The trend of traffic in the southwest is fanlike, both with respect to the movement of raw materials and the distribution of the manufactured products. The former move east to New Orleans, northeast to Memphis and St. Louis, and north to Kansas City, while the latter radiate throughout the region from the cities just mentioned. An increasing amount of business is now moving direct to Galveston and New Orleans for shipment overseas to supply the needs of our troops and the allied nations. Shipbuilding activity has sprung up at various points on the Gulf of Mexico, and this industry, also, is creating a more pronounced trend of traffic towards the South and Southwest. With the ex-

ception of the Southern Pacific lines, the Southwestern region contains no transcontinental lines. It is largely out of the zone of the great overland routes, most of which are situated in the regions to the north.

The Southwest is not a large producer of earnings. Data secured from the statistical abstract of the Interstate Commerce Commission for the fiscal year ended June 30, 1916, (and from the I. C. C. statistics for the previous year for some of the shorter lines) show operating revenues for the southwestern railroads totalling about \$300,000,000. These statistics, of course, represent a mere approximation of the business done by those lines, as they were arrived at by making estimated deductions and additions for parts of systems which have been added to or cut off from this region by the Railroad Administration. In general, they probably give a fairly accurate idea of the relation of this region to the remainder of the country. The figures do not include some small lines, recently added to the list of government-controlled roads.

Operating expenses for the southwestern lines in 1916 amounted to nearly \$220,000,000 and net revenues from railway operation were over \$80,000,000, or about nine per cent of those last reported for all railroads in the country by the Interstate Commerce Commission. It will be noted that the mileage of the railroads in the Southwestern region is from 14 to 16 per cent of the total railway mileage in the country, while the net revenues of the region are somewhat less in relation to those reported for all lines in the United States.

While it is difficult to ascertain accurately the amount of equipment owned by the railways in the Southwestern region because of the division of certain lines among the different regions, reference to Interstate Commerce Commission statistics, with due allowances for the interregional location of roads, shows approximately 180,000 freight cars, 5,600 locomotives and 2,700 cars in passenger service. In other words, the railways in the Southwestern region own nearly eight per cent of the freight equipment of the country, nearly nine per cent of the locomotives and approximately five per cent of the cars in passenger service.

The more important lines included in the Southwestern region are the Gulf, Colorado & Santa Fe, the Gulf Coast Lines, the Southern Pacific lines in Louisiana and Texas, the Missouri Pacific system, the Missouri, Kansas & Texas, the St. Louis-San Francisco, the St. Louis, Southwestern, the Texas & Pacific, the International & Great Northern, the Kansas City Southern, and the Rock Island Lines (South of Herington, Kans.; Tucumcari, N. M., to Memphis, Tenn., and branches; and St. Louis to Kansas City.) While the Southwestern region contains railroads running into Kansas City, railway operation in the Kansas City terminal district has been placed under the control of the director of the central Western region. The St. Louis and East St. Louis terminals, however, are under the control of the regional director of the Southwestern lines and under the immediate charge of A. S. Johnson, terminal manager, who was previously assistant general manager of the Terminal Railroad Association of St. Louis.

So far only one operating district has been created in the Southwestern region; this comprises the railroads in Texas and is under the authority of F. G. Pettibone, district director, and formerly vice-president and general manager of the Gulf, Colorado & Santa Fe. It is in this district that the most radical rearrangement of lines has been effected. Old roads have been broken up and lines regrouped to form new systems with the evident idea that an officer can supervise a series of lines in one locality more efficiently than an equivalent mileage stretched out as the average railway system has been developed for strategical and traffic reasons. In the development of this plan the Cotton Belt has been merged with the Missouri Pacific, while the Frisco and the

Katy north of the Red river have been grouped under one federal manager. The readjustment has been even more radical in Texas where the lines of the Southern Pacific, Santa Fe, Texas & Pacific, Frisco, Katy, International and Great Northern and a number of short lines have been combined into four groups, entire lines being placed in one group in some instances and distributed between two and three groups in others.

The regional director of the Southwestern region and the members of his staff are all men who are familiar, as a result of long experience on individual railroads in that section of the country with the territory in which they will control operation. It was logical to select Benjamin F. Bush as the operating head of the railroads in the Southwest, as the road of which he has been the chief executive is unquestionably the strongest in that region in terms of mileage and earnings. Mr. Bush was president and receiver of the Missouri Pacific system from May 1, 1911, until the time of his appointment as regional director this year. His experience with that line, and particularly that part of it formerly known as the St. Louis, Iron Mountain & Southern, has put him in close touch with conditions in the territory in which he directs railroad operations. Although he was president and receiver of the Western Maryland from 1907 to 1911, he was with the Missouri Pacific during the four previous years as fuel agent, and practically all of his railway career before that was also in the West.

William G. Vollmer, assistant regional director of the southwestern railroads, is well suited for his position as an aid to Mr. Bush by virtue of association with him as assistant to the president of the Missouri Pacific and by previous experience on that road dating back to 1905. Mr. Vollmer's work has been both in the engineering and operating departments.

William G. Biddle, traffic assistant to the regional director, has spent the past seven and a half years with the St. Louis-San Francisco, during the last year of which he was president. His railroad experience has been largely in the traffic department. Previous to his election as president he was first vice-president in charge of traffic and chief traffic officer under the receivers on the Frisco. In addition, he has been vice-president in charge of traffic of the Chicago, Rock Island & Pacific and freight traffic manager of the Atchison, Topeka & Santa Fe.

E. A. Hadley, engineering assistant to Mr. Bush, was chief engineer of the Missouri Pacific system from May, 1915, up to the time of his recent appointment on the regional staff. The duties of that position put him in close touch with railway conditions throughout the Southwest. His selection as engineering assistant was therefore a logical one. In the five years previous to his appointment as chief engineer of the Missouri Pacific, Mr. Hadley was consecutively engineer of design and assistant engineer in charge of special engineering investigations for the president's office.

C. A. How, chairman of the regional purchasing committee, is acquainted with the needs of this area through his experience as general purchasing agent of the Missouri Pacific. Previous to the creation of the Southwestern region, Mr. How was chairman of a similar committee in the Western district and has been connected with the government purchasing organization since its inception. Associated with him on this committee is J. L. Cowan, purchasing agent of the San Antonio & Aransas Pass.

G. W. Briece, supervisor of transportation, is another Missouri Pacific officer, having been in the transportation department of that railroad since December 1, 1902. He served as passenger and freight car distributor and chief clerk to the superintendent of transportation up to October 1, 1913, on which date he was promoted to car accountant,

which position he held until his appointment as supervisor of transportation on the staff of the regional director.

W. E. McGarry, supervisor of car service on the staff of the regional director, has been intimately connected with the terminal situation of St. Louis for over 12 years. After being employed for some time on the Baltimore & Ohio and the Frisco, he was made chief clerk to the general manager of the Terminal Railroad Association of St. Louis on November 1, 1905, and was made a special representative in the operating department of the same company in February, 1915. On August 1, 1917, he was made vice-chairman of the St. Louis committee of the commission on car service, remaining in that position until he was selected as supervisor of car service by Mr. Bush, on July 1, 1918.

Frank G. Pettibone, district director of the lines in Texas, has been identified with the Gulf, Colorado & Santa Fe in that state ever since January 1, 1901. For the past 12 years he has been in charge of the operation of that road as second vice-president and general manager. Previous to that he was general superintendent on the same line. His long railway experience in Texas has given him an

excellent knowledge of the roads in that state and a thorough familiarity with the resources and products of that part of the country.

Freight Operations in May

THE FIGURES compiled by the Operating Statistics Section of the Railroad Administration showing freight train operation in May, 1918, do not show as good results as were obtained in May, 1917. As explained in a note to the tables herewith, this results from the fact that the revenue ton miles and the averages based thereon (train load, car load, and ton miles per locomotive and per car) in May, 1918, are somewhat understated. This is due to the adoption of the universal interline waybill on May 1, 1918, which has increased the proportion of freight moving on original billing. The ton miles on such freight are ordinarily not taken into account until the revenue is reported back by the delivering carrier. Consequently the "lap-over" of tons actually moved by the train miles and car miles of May, but not taken into account until June, is larger this year than last year.

FREIGHT TRAIN OPERATION—MONTH OF MAY, 1918, COMPARED WITH SAME MONTH OF PREVIOUS YEAR
SUMMARY

Item	UNITED STATES*				EASTERN DISTRICT			
	1918	1917	Increase or decrease		1918	1917	Increase or decrease	
			Amount	Per cent			Amount	Per cent
Freight train-miles	55,061,974	56,708,276	d 1,646,302	d 2.9	22,791,002	23,471,600	d 680,598	d 2.9
Loaded freight car-miles	1,323,969,010	1,443,384,748	d 119,415,838	d 8.3	600,478,777	648,369,322	d 47,890,545	d 7.4
Empty freight car-miles	658,058,256	615,571,885	42,486,371	6.9	307,449,766	282,154,637	25,295,129	9.0
Total freight car-miles—loaded and empty	1,982,027,266	2,058,956,733	d 76,929,467	d 3.7	907,928,543	930,523,959	d 22,595,416	d 2.4
Freight locomotive-miles	64,078,607	65,313,761	d 1,235,154	d 1.9	28,227,286	28,564,215	d 336,929	d 1.2
Revenue ton-miles	33,718,307,439	35,443,351,627	d 1,725,044,188	d 4.9	16,634,691,269	17,397,151,573	d 762,460,304	d 4.4
Non-revenue ton-miles	3,002,480,335	3,108,871,766	d 106,391,431	d 3.4	871,998,355	942,011,930	d 70,013,575	d 7.4
Average number of freight locomotives in service	30,791	30,321	470	1.6	13,269	12,844	425	3.3
Average number of freight locomotives in or awaiting shop	4,555	4,357	198	4.5	2,081	1,984	97	4.9
Average number of freight cars in service	2,418,399	2,288,446	129,953	5.7	1,315,401	1,242,416	72,985	5.9
Average number of freight cars in or awaiting shop	129,464	128,809	655	0.5	75,019	69,163	5,856	8.5
Home	71,507	98,212	d 26,705	d 27.2	39,324	51,962	d 12,638	d 24.3
Foreign	57,957	30,597	27,360	89.4	35,695	17,201	18,494	107.5
Tons per train	667	680	d 13	d 1.9	768	781	d 13	d 1.7
Tons per loaded car	27.7	26.7	1.0	3.7	29.2	28.3	0.9	3.2
Average miles per locomotive per day	67.1	69.5	d 2.4	d 3.5	68.6	71.7	d 3.1	d 4.3
Average miles per car per day	26.4	29.0	d 2.6	d 9.0	22.3	24.2	d 1.9	d 7.9
Per cent of empty car-miles	33.2	29.9	3.3	11.0	33.9	30.3	3.6	11.9
Per cent of freight locomotives in or awaiting shop	14.8	14.4	0.4	2.8	15.7	15.5	0.2	1.3
Per cent of freight cars in or awaiting shop	5.4	5.6	d 0.2	d 3.6	5.7	5.6	0.1	1.8
Revenue ton-miles:								
Per freight locomotive per month	1,095,070	1,168,937	d 73,867	d 6.3	1,253,651	1,354,496	d 100,845	d 7.4
Per freight car per month	13,942	15,488	d 1,546	d 10.0	12,646	14,003	d 1,357	d 9.7
Average miles operated—single track	221,688.73	221,396.81	291.92	0.1	57,738.54	57,892.27	d 153.73	d 0.3

Item	SOUTHERN DISTRICT				WESTERN DISTRICT			
	1918	1917	Increase or decrease		1918	1917	Increase or decrease	
			Amount	Per cent			Amount	Per cent
Freight train-miles	10,347,921	9,545,109	802,812	8.4	21,923,051	23,691,567	d 1,768,516	d 7.5
Loaded freight car-miles	224,878,705	225,521,258	d 642,553	d 0.3	498,611,528	569,494,268	d 70,882,740	d 12.4
Empty freight car-miles	122,624,238	104,047,495	18,576,743	17.9	227,984,252	229,369,753	d 1,385,501	d 0.6
Total freight car-miles—loaded and empty	347,502,943	329,568,753	17,934,190	5.4	726,595,780	798,864,021	d 72,268,241	d 9.0
Freight locomotive-miles	11,663,879	10,797,592	866,287	8.0	24,187,442	25,951,954	d 1,764,512	d 6.8
Revenue ton-miles	5,790,912,418	5,725,347,871	65,564,547	1.1	11,292,703,752	12,320,852,183	d 1,028,148,431	d 8.3
Non-revenue ton-miles	507,510,125	535,344,264	d 27,834,139	d 5.2	1,622,971,855	1,631,515,572	d 8,543,717	d 0.5
Average number of freight locomotives in service	5,250	5,106	144	2.8	12,272	12,371	d 99	d 0.8
Average number of freight locomotives in or awaiting shop	591	570	21	3.7	1,883	1,803	80	4.4
Average number of freight cars in service	346,888	283,208	63,680	22.5	756,110	762,822	d 6,712	d 0.9
Average number of freight cars in or awaiting shop	16,223	16,408	d 185	d 1.1	38,222	43,238	d 5,016	d 11.6
Home	9,234	13,130	d 3,896	d 29.7	22,949	33,120	d 10,171	d 30.7
Foreign	6,989	3,278	3,711	113.2	15,273	10,118	5,155	50.9
Tons per train	609	656	d 47	d 7.2	589	589	.....	.....
Tons per loaded car	28.0	27.8	0.2	0.7	25.9	24.5	1.4	5.7
Average miles per locomotive per day	71.7	68.2	3.5	5.1	63.6	67.7	d 4.1	d 6.1
Average miles per car per day	32.3	37.5	d 5.2	d 13.9	31.0	33.8	d 2.8	d 8.3
Per cent of empty car-miles	35.3	31.6	3.7	11.7	31.4	28.7	2.7	9.4
Per cent of freight locomotives in or awaiting shop	11.3	11.2	0.1	0.9	15.3	14.6	0.7	4.8
Per cent of freight cars in or awaiting shop	4.7	5.8	d 1.1	d 19.0	5.1	5.7	d 0.6	d 10.5
Revenue ton-miles:								
Per freight locomotive per month	1,103,031	1,121,256	d 18,225	d 1.6	920,201	995,946	d 75,745	d 7.6
Per freight car per month	16,694	20,216	d 3,522	d 17.4	14,935	16,152	d 1,217	d 7.5
Average miles operated—single track	37,152.79	36,967.37	185.42	0.5	126,797.40	126,537.17	260.23	0.2

COMBINED FIVE MONTHS JANUARY TO MAY, INCLUSIVE

Item	UNITED STATES*				EASTERN DISTRICT			
	1918	1917	Increase or decrease		1918	1917	Increase or decrease	
			Amount	Per cent			Amount	Per cent
Freight train-miles	260,754,461	269,227,192	d 8,742,731	d 3.1	163,988,442	111,334,670	d 8,246,228	d 7.4
Loaded freight car-miles	5,903,285,985	6,456,154,497	d 552,868,512	d 8.6	2,506,082,873	2,869,227,211	d 363,144,338	d 12.7
Empty freight car-miles	2,620,147,014	2,664,267,262	d 44,120,248	d 1.7	1,167,797,788	1,250,667,734	d 82,869,946	d 6.6
Total freight car-miles—loaded and empty	8,523,442,999	9,120,421,759	d 596,988,760	d 6.5	3,673,880,661	4,119,894,945	d 446,014,284	d 10.8
Freight locomotive-miles	304,196,165	315,549,190	d 11,353,025	d 3.6	128,344,269	136,062,013	d 7,717,744	d 5.7
Revenue ton-miles	154,195,764,273	155,066,696,398	d 870,932,125	d 0.6	71,853,516,276	75,313,713,865	d 3,460,197,589	d 4.6
Non-revenue ton-miles	14,156,151,131	14,311,931,058	d 155,779,927	d 1.1	4,415,573,454	4,456,630,289	d 41,056,835	d 0.9
Average number of freight locomotives in service	30,655	30,264	391	1.3	13,183	12,875	308	2.4
Average number of freight locomotives in or awaiting shop	4,676	4,455	221	5.0	2,103	1,961	142	7.2
Average number of freight cars in service	2,379,553	2,282,737	96,816	4.2	1,258,255	1,218,316	39,939	3.3
Average number of freight cars in or awaiting shop	122,208	127,181	d 4,973	d 3.9	70,450	69,905	545	0.8
Home	76,083	96,525	d 20,442	d 21.2	42,463	52,433	d 9,970	d 19.0
Foreign	46,125	30,656	15,469	50.5	27,987	17,472	10,515	60.2
Tons per train	646	629	17	2.7	740	716	24	3.4
Tons per loaded car	28.5	26.2	2.3	8.8	30.4	27.8	2.6	9.4
Average miles per locomotive per day	65.7	69.1	d 3.4	d 4.9	64.5	70.0	d 5.5	d 7.9
Average miles per car per day	23.7	26.4	d 2.7	d 10.2	19.3	22.4	d 3.1	d 13.8
Per cent of empty car-miles	30.7	29.2	1.5	5.1	31.8	30.4	1.4	4.6
Per cent of freight locomotives in or awaiting shop	15.3	14.7	0.6	4.1	16.0	15.2	0.8	5.3
Per cent of freight cars in or awaiting shop	5.1	5.6	d 0.5	d 8.9	5.6	5.7	d 0.1	d 1.8
Revenue ton-miles:								
Per freight locomotive per month	1,006,007	1,024,754	d 18,747	d 1.8	1,090,094	1,169,922	d 79,828	d 6.8
Per freight car per month	12,960	13,586	d 626	d 4.6	11,421	12,364	d 943	d 7.6
Average miles operated—single track	222,670.79	222,510.37	160.42	†	58,070.43	58,314.44	d 244.01	d 0.4

Item	SOUTHERN DISTRICT				WESTERN DISTRICT			
	1918	1917	Increase or decrease		1918	1917	Increase or decrease	
			Amount	Per cent			Amount	Per cent
Freight train-miles	50,332,605	47,859,719	2,472,886	5.2	107,333,414	110,032,903	d 2,699,389	d 2.5
Loaded freight car-miles	1,062,738,143	1,087,690,749	d 24,952,606	d 2.3	2,334,464,969	2,499,236,537	d 164,771,568	d 6.6
Empty freight car-miles	519,302,179	476,962,943	42,339,236	8.9	933,047,047	936,636,585	d 3,589,538	d 0.4
Total freight car-miles—loaded and empty	1,582,040,322	1,564,653,692	17,386,630	1.1	3,267,512,016	3,435,873,122	d 168,361,106	d 4.9
Freight locomotive-miles	56,557,821	53,584,217	2,973,604	5.5	119,294,075	125,902,960	d 6,608,885	d 5.2
Revenue ton-miles	28,092,877,891	27,228,151,472	864,726,419	3.2	54,249,370,106	52,524,831,061	1,724,539,045	3.3
Non-revenue ton-miles	2,592,295,113	2,607,296,010	d 15,000,897	d 0.6	7,148,282,564	7,248,004,759	d 99,722,195	d 1.4
Average number of freight locomotives in service	5,184	5,080	104	2.0	12,288	12,309	d 21	d 0.2
Average number of freight locomotives in or awaiting shop	637	625	12	1.9	1,936	1,869	67	3.6
Average number of freight cars in service	348,744	289,301	59,443	20.5	772,354	775,120	d 2,566	d 0.3
Average number of freight cars in or awaiting shop	14,578	15,242	d 664	d 4.4	37,180	42,034	d 4,854	d 11.5
Home	9,131	11,969	d 2,838	d 23.7	24,489	32,123	d 7,634	d 23.8
Foreign	5,447	3,273	2,174	66.4	12,691	9,911	2,780	28.0
Tons per train	610	623	d 13	d 2.1	572	543	29	5.3
Tons per loaded car	28.9	27.4	1.5	5.5	26.3	23.9	2.4	10.0
Average miles per locomotive per day	72.3	69.9	2.5	3.6	64.3	67.8	d 3.5	d 5.2
Average miles per car per day	30.0	35.8	d 5.8	d 16.2	28.0	29.4	d 1.4	d 4.8
Per cent of empty car-miles	32.8	30.5	2.3	7.5	28.6	27.3	1.3	4.8
Per cent of freight locomotives in or awaiting shop	12.3	12.3	.....	.....	15.8	15.2	0.6	3.9
Per cent of freight cars in or awaiting shop	4.2	5.3	d 1.1	d 20.8	4.8	5.4	d 0.6	d 11.1
Revenue ton-miles:								
Per freight locomotive per month	1,083,830	1,071,974	9,493	0.9	882,965	853,438	29,527	3.5
Per freight car per month	16,111	18,823	d 2,712	d 14.4	14,044	13,553	491	3.6
Average miles operated—single track	38,043.67	37,821.06	222.61	0.6	126,566.69	126,374.87	191.82	0.1

d Decrease. * The returns included in the monthly statement represent about 96 per cent of the total operated mileage of the roads in Class I.
† Less than one-tenth of one per cent.



Copyright by Press Illustrating Service

Hurrying Supplies of Shells to the Front

Doings of the United States Railroad Administration

Universal Mileage Script; Freight Situation Improved;
Advances Now Total \$203,000,000

WASHINGTON, D. C.

THINGS HAVE BEEN RATHER QUIET in the offices of the Railroad Administration this week, pending the return of the director general. Mr. McAdoo, who was in Chicago on Tuesday on his way east from his recent western trip, is expected back at his office next week, when it is supposed that he will give his attention to the compensation contract. Prior to his return to Washington he was expected to spend a short time at White Sulphur Springs. As briefly noted in last week's issue several of the directors who went west with him were back at their offices a week ago.

Property Protection Section Showing Results

The vigorous campaign inaugurated by Director General McAdoo to stop thefts of railroad property is beginning to show gratifying results. Since the Property Protection Section of the Division of Law of the Railroad Administration was established on March 26, 1918, 1,098 prosecutions of thieves operating against railroad property have been brought, 592 convictions have been secured and 244 penitentiary sentences have been imposed. This section is receiving the cordial co-operation of the Federal authorities, of local police organizations throughout the country, of the courts, and of a number of civic organizations. Railroad police agencies already in existence are being utilized and new railroad police agencies are now being organized at various railroad centers for the purpose of more effectively stamping out thefts from railroads entering those points. Successful efforts are being made completely to co-ordinate railroad police and other public agencies at the principal centers.

Several statutes are in effect under which prosecutions for thefts from railroads can be brought. They include the Act of Congress of February 13, 1913, to punish unlawful breaking of seals of railroad cars, stealing freight and express packages or baggage, etc., in process of transportation in interstate shipment, etc.; the act of March 21, 1918, to empower the president to take over and operate the railroads during the period of the war; the act of August 10, 1917, amending Section 1 of the act to regulate commerce, which provides for punishment for obstructing, retarding, or interfering with make-up of any train, car, locomotive, or other vehicle in the movement of interstate commerce; the act of April 20, 1918, known as the Sabotage Act, to punish the wilful injury or destruction of war material, or of war premises or utilities used in connection with war material, etc. There are a great many state statutes which may also be invoked. In enforcing these statutes the Railroad Administration and the police forces of the various railroads have proved successful in co-operation with local police authorities in carrying on vigorous campaigns to stop the theft of railroad property in several of the principal centers.

In St. Louis a force of city detectives was assigned to give exclusive attention to the work, and uniformed policemen were sent upon the railroad premises as a part of their regular duty, to prevent offenses of this class. As a result of this co-operative work, more than 100 employees and others have been indicted by the Federal Grand Jury in cases of thefts of goods of large value. Shipments to a value of more than \$75,000 have already been recovered.

Other large cities have taken similar measures.

Among other very important results of the work of this bureau are significant and helpful warnings from the bench by some of the judges of the United States district courts of their intention to impose severe sentences in this class of cases.

Such warnings in themselves are efficacious. They exercise a very strong deterring influence. An instance of this kind follows: On July 30, U. S. District Court at Toledo, O., in continuing for sentence a case in which there was a strong plea for leniency because of the large families of the defendants, made a very impressive statement from the bench that "in any new case no plea for leniency would receive any consideration, but in all such new cases conviction would mean a sentence to the penitentiary for a considerable time, and that no small bonds would be accepted."

As result of campaign inaugurated by the Railroad Administration many reports of improved conditions have been received.

The assistance of the public in building up a healthy sentiment against this kind of crime is sought by the Railroad Administration. In the past there has been a tendency on the part of the public to minimize the seriousness of thefts from railroads, and in many cases trifling penalties have been imposed by courts for offenses of this kind. This probably was due in part to anti-corporation sentiment. At the present time the railroad properties of the country are under the control of the United States Government and therefore anyone stealing from a railroad is robbing the United States.

Advances Now Total \$203,000,000

The Railroad Administration during July made advances to railroads totaling \$43,205,050, over half of which was to cover back wages from January 1, according to the award of the Wage Board a couple of months ago. The total advances to the railroads up to August 1 totaled \$203,714,050.

The statement authorized by the director general, July 31, said that the \$43,205,050 advanced during July either as loans or on account of standard rentals or back wages was distributed to 37 different railroads.

The amount advanced to all roads prior to July 1, 1918, was \$160,509,000 (to 42 different railroads or systems), making the total sum advanced to all railroads throughout the country by the director general up to August 1, 1918, \$203,714,050. The money thus dispensed was obtained as follows:

From the United States treasury revolving fund	\$180,559,000
From surplus balances of certain railroads	23,155,050
Total	\$203,714,050

Of the \$43,205,050 disbursed in the month of July, the larger portion, or approximately \$23,269,000, was advanced to the federal managers of certain railroads to pay up the back wages due to their employees from January 1 to May 31 in accordance with award submitted in June by the Arbitration Committee, and for other operating needs; \$6,328,775 was advanced to railroads on account of their standard estimated rentals; and \$13,607,275 was advanced in the shape of loans, on demand, at six per cent per annum interest.

The railroad lines to which advances were made during the month of July were as follows:

Chicago, Milwaukee & St. Paul	\$5,725,000
Pennsylvania Railroad	5,500,000
New York Central	5,000,000
Southern Railway	3,695,000
Lehigh Valley	3,500,000
Chicago, Rock Island & Pacific	3,000,000
Missouri, Kansas & Texas	2,420,000
Illinois Central	2,000,000
Denver & Rio Grande	1,400,000
Wabash	1,350,000
Seaboard Air Line	1,350,000
Missouri Pacific	1,000,000
Hudson & Manhattan	1,000,000
Central of Georgia	750,000
Chesapeake & Ohio	750,000
Chicago & Alton	600,000
Terminal R. R. Association of St. Louis	525,000

St. Louis Southwestern.....	500,000
Galveston, Harrisburg & San Antonio.....	500,000
Chicago, Indianapolis & Louisville.....	325,000
Indiana Harbor Belt.....	220,000
San Antonio & Aransas Pass.....	200,000
Chicago Junction.....	200,000
Buffalo, Rochester & Pittsburgh.....	200,000
Norfolk Southern.....	190,000
Atlanta, Birmingham & Atlanta.....	189,000
Belt Railway of Chicago.....	155,000
Duluth, South Shore & Atlantic.....	150,000
New York, Chicago & St. Louis.....	132,275
New Orleans Great Northern.....	120,000
Kansas City, Mexico & Orient.....	120,000
Chicago & Western Indiana.....	115,000
Minneapolis & St. Louis.....	100,000
Ann Arbor.....	75,000
St. Louis-San Francisco.....	60,000
Washington, Brandywine & Point Lookout.....	50,000
Detroit, Toledo & Ironton.....	38,775

The total advances made to date, including the loans to railroad corporations, compensation, and also advances made by the Director General to the federal managers aggregated \$203,714,050, which was distributed as follows:

New York, New Haven & Hartford.....	\$46,964,000
New York Central.....	40,000,000
Pennsylvania Railroad.....	30,500,000
Chicago, Milwaukee & St. Paul.....	14,725,000
Illinois Central.....	9,750,000
Baltimore & Ohio.....	9,000,000
Erie.....	7,500,000
Chicago, Rock Island & Pacific.....	6,000,000
Denver & Rio Grande.....	4,100,000
Southern Railway.....	3,695,000
Lehigh Valley.....	3,500,000
Chesapeake & Ohio.....	2,750,000
Wabash.....	2,650,000
Southern Pacific.....	2,500,000
Seaboard Air Line.....	2,350,000
Delaware & Hudson.....	2,000,000
Chicago, Burlington & Quincy.....	1,500,000
Chicago, Indianapolis & Louisville.....	1,325,000
Missouri Pacific.....	1,000,000
Hudson & Manhattan.....	1,000,000
Minneapolis & St. Louis.....	850,000
St. Louis-San Francisco.....	810,000
Buffalo, Rochester & Pittsburgh.....	800,000
Central of Georgia.....	750,000
Chicago & Alton.....	600,000
Norfolk Southern.....	540,000
Terminal R. R. Association of St. Louis.....	525,000
Hocking Valley.....	500,000
Central Vermont.....	285,000
Ann Arbor.....	275,000
Detroit, Toledo & Ironton.....	233,775
Indiana Harbor Belt.....	220,000
San Antonio & Aransas Pass.....	200,000
Chicago Junction.....	200,000
Illinois Southern.....	160,000
Belt Railway of Chicago.....	155,000
Duluth, South Shore & Atlantic.....	150,000
New York, Chicago & St. Louis.....	132,275
Kansas City, Mexico & Orient.....	120,000
New Orleans Great Northern.....	120,000
Chicago & Western Indiana.....	115,000
Washington, Brandywine & Point Lookout.....	50,000

Of the above, all were in the shape of loans to railroad corporations or advances on account of compensation, except \$23,269,000, which was advanced to the federal managers for the purpose of meeting operating needs, principally for back wages.

The \$30,777,870 deposited with the director general between April 1 and July 31, by various railroads from their surplus funds was received from the following railroads:

Atlantic Coast Line and Louisville & Nashville.....	\$6,000,000
Southern Pacific.....	3,500,000
Atchison, Topeka & Santa Fe.....	3,000,000
Denver & Rio Grande.....	2,150,000
Chicago, Burlington & Quincy.....	1,500,000
Norfolk & Western.....	1,500,000
Norfolk Pacific.....	1,500,000
Hudson & Manhattan.....	1,100,000
Missouri Pacific.....	1,000,000
Colorado & Southern.....	850,000
Illinois Central.....	750,000
St. Louis-San Francisco.....	750,000
Fort Worth & Denver City.....	700,000
Alabama Great Southern.....	691,195
Chicago & Northwestern.....	500,000
El Paso & Southwestern.....	500,000
Galveston, Harrisburg & San Antonio.....	500,000
Kansas City Southern.....	500,000
Elgin, Joliet & Eastern.....	500,000
Chicago Great Western.....	400,000
Duluth, Missabe & Northern.....	400,000
Cinn., New Orleans & Texas Pac.....	386,675
Spokane, Portland & Seattle.....	300,000
Houston & Texas Central.....	300,000
Central of Georgia.....	300,000
Gulf Coast Lines.....	200,000
Vicksburg, Shreveport & Pacific.....	200,000
Alabama & Vicksburg.....	200,000
International & Great Northern.....	150,000
New York, Ontario & Western.....	150,000
New Orleans & Northeastern.....	100,000
Louisville Henderson & St. Louis.....	100,000
Duluth & Iron Range.....	100,000

In accordance with the provisions of the director general's General Order No. 37 issued under date of June 19, the working balances of all railroad companies under government control are being transferred from the corporate treasurers to the federal treasurers and practically all railroad operating bank accounts will hereafter be kept in the name of the United States Railroad Administration.

Universal Mileage Scrip

The illustrations show the outside and inside, respectively, of the new mileage scrip book which the Railroad Administration will soon be ready to place on sale. The plan of the book as it has finally been worked out differs in several ways

UNITED STATES RAILROAD ADMINISTRATION
W. G. McADOO,
Director General of Railroads

ISSUED BY
MOBILE & OHIO RAILROAD.

\$30.00 SCRIP BOOK
(\$32.40 including War Tax)

GOOD FOR ONE OR MORE PERSONS.

Form U.S.S. No. _____

1. THIS SCRIP BOOK, WHEN OFFICIALLY STAMPED AND ISSUED, WILL BE HONORED BY ALL RAILROADS UNDER FEDERAL CONTROL, SUBJECT TO TARIFF REGULATIONS.

2. THE COUPONS CONTAINED HEREIN WILL BE ACCEPTED AT AUTHORIZED TARIFF FARES AND CHARGES AS FOLLOWS:

(A) FOR PASSAGE ON TRAINS IN COACH PARLOR OR SLEEPING CAR TO THE EXTENT OF FARES QUOTED IN TARIFF HELD BY CONDUCTOR TO WHOM TENDERED.

TO SECURE BENEFIT OF SHORT LINE FARE TO POINTS NOT COVERED BY TARIFF HELD BY CONDUCTOR, HOLDER MUST EXCHANGE COUPONS AT TICKET OFFICE FOR TICKET.

(B) FOR BAGGAGE CHARGES (EXCESS WEIGHT, EXCESS SIZE, EXCESS VALUATION AND TRANSFER) AS AUTHORIZED IN BAGGAGE TARIFFS.

3. WAR TAX MUST NOT BE COLLECTED WHEN DETACHMENTS ARE MADE, SUCH TAX HAVING BEEN PAID WHEN SCRIP BOOK WAS SOLD.

(Continued on back cover.)

1. IF BOOK CONTAINS INSUFFICIENT COUPONS THE DIFFERENCE WILL BE COLLECTED IN CASH.

2. COUPONS WILL NOT BE ACCEPTED UNLESS DETACHED BY TICKET AGENT, CONDUCTOR, BAGGAGE AGENT OR OTHER AUTHORIZED EMPLOYEE.

3. COUPONS NOT BEARING SAME NUMBER AS THIS COVER OR DETACHED COUPONS PRESENTED WITHOUT A COVER, WILL NOT BE HONORED.

4. THIS BOOK WILL BE GOOD ONE YEAR FROM DATE OF SALE AS STAMPED HEREON, THE DATE OF EXPIRATION BEING INDICATED BY PUNCH MARKS IN MARGIN.

5. UNUSED COUPONS ATTACHED TO COVER OF SAME NUMBER WILL BE REDEEMED THROUGH THE GENERAL PASSENGER OFFICE IF PRESENTED TO ISSUING CARRIER WITHIN SIX MONTHS FROM DATE OF EXPIRATION.

6. IN SELLING THIS BOOK FOR PASSAGE OVER OTHER LINES, AND IN CHECKING BAGGAGE HEREON, THE SELLING CARRIER ACTS ONLY AS AGENT AND IS NOT RESPONSIBLE BEYOND ITS OWN LINE.

L. Shaevel
General Passenger Agent,
ST. LOUIS, MO.

STAMP

HERE

\$3.12 W. G. McADOO, Director General of Railroads

\$3.15 So Ry. 000

\$3.18 So Ry. 000

\$3.21 UNITED STATES RAILROAD ADMINISTRATION

\$3.24 So Ry. 000

\$3.27 W. G. McADOO, Director General of Railroads

\$3.30 So Ry. 000

\$3.33 So Ry. 000

\$3.36 UNITED STATES RAILROAD ADMINISTRATION

\$3.39 So Ry. 000

\$3.42 W. G. McADOO, Director General of Railroads

\$3.45 So Ry. 000

\$3.48 So Ry. 000

\$3.51 UNITED STATES RAILROAD ADMINISTRATION

\$3.54 So Ry. 000

\$3.57 W. G. McADOO, Director General of Railroads

\$3.60 So Ry. 000

\$3.63 So Ry. 000

\$3.66 UNITED STATES RAILROAD ADMINISTRATION

\$3.69 So Ry. 000

Coupon 1
2996

Coupon 2
2996

Coupon 3
2996

Coupon 4
2996

Coupon 5
2996

Coupon 6
2996

Coupon 7
2996

Coupon 8
2996

Coupon 9
2996

Coupon 10
2996

Covers and Inside of \$30 Scrip Book

Cover should be marked So. Ry. instead of Mobile & Ohio in order to agree with scrip.

from the original idea announced about a month ago (See the *Railway Age* of July 12, page 53). The books will contain \$29.40 worth of strip coupons, each of a value of 3 cents and there will also be 60 cents worth of one cent tickets for use in

making up odd amounts. The books will be good on any road controlled by the Railroad Administration. They will be sold by the originating road for \$30, plus the war tax of \$2.40, which will be collected at the time the book is sold. They will be payable only for transportation whether in coach, sleeping or parlor car, and for baggage charges, but not for dining car or for Pullman berth or seat tickets, as was originally intended. Under the original plan also it would have been necessary to collect the tax on the train because of the difference in the tax on tickets and Pullman charges.

The books are not meant quite to fill the position occupied by the former mileage books as there is no reduced rate, but it is expected that they will be used for the convenience they will offer. The books carry a notation to the effect that "To secure benefit of short line fare to points not covered by tariff held by conductor, holder must exchange coupons at ticket office for ticket." This accrues to the advantage of the holder in cases where the through fare is less than the aggregate of the local fares which the several conductors would collect in scrip on the trains.

Car Service Section Busy on Sailing Day Plans

The Car Service Section has announced the names of the chairmen of committees appointed in each of the regions to make a detailed study of the sailing day plan with a view to extending its use and co-ordinating the work that has already been done by individual railroads.

The committee chairmen appointed by the regional directors are as follows:

Eastern: C. H. Ketcham, inspector of transportation on the staff of the regional director.

Allegheny: J. R. Kearney, assistant to vice-president of the Baltimore & Ohio.

Poconong: J. A. Talbot, superintendent of car service of the Norfolk & Western.

Southern: E. A. DeFuniak, formerly general freight agent of the Louisville & Nashville at Montgomery, Ala.

Northwestern: T. W. Proctor, formerly assistant general freight agent of the Chicago, Milwaukee & St. Paul.

Central Western: George Morton, assistant general freight agent of the Chicago, Burlington & Quincy at Chicago.

Southwestern: F. M. Lucore, assistant general manager of the Southern Pacific, Louisiana Lines.

These general regional committees will be assisted by various sub-committees. It will be their duty to make a survey covering a period of 10 to 15 days and to formulate sailing day plans for the various shipping centers in their territory. One of the chief objects aimed at is to co-ordinate the various sailing day plans already in effect so as to secure routings over the lines to which traffic most naturally belongs, thereby avoiding in so far as possible transfers from road to road at transfer points. The committees will be expected further to discuss the matter with chambers of commerce, shippers, etc.

The results expected are these:

More expeditious handling of freight.

Saving in expense.

Satisfaction and service to the public.

Elimination of claims for loss and damage, etc.

Increased car loading and resulting saving from the car conservation standpoint.

General Improvement in Freight Situation

Advices to the Railroad Administration report a general improvement in the freight situation, according to a statement issued last Saturday. Cars are in abundant supply and are being moved promptly.

The statement quotes the Georgia Fruit Exchange of Atlanta, Georgia, as writing:

We are glad to be able to advise you that we are now about to complete the movement of the largest crop of fresh peaches ever shipped out of the State, or in fact any State in the Union. Shipment to and including July 17 was 7,432 cars, and probably 400 more to move. The largest single day's shipment amounted to practically 600 cars.

The general service rendered by the railroads in the movement of the crop, viewed in the light of existing transportation and labor conditions,

has been such that we desire to express our gratification and congratulation upon the successful outcome.

It also quotes the weekly bulletin of the West Coast Lumbermen's Association as follows:

Production for the week ended July 20 at a group of 124 mills reporting to the West Coast Lumbermen's Association was 76,260,629 feet, which was within 2,631,371 feet, or 3.33 per cent of the normal.

Another notable element in the situation for the week was the continued abundance of freight cars. The mills shipped a total of 52,140,000 feet or 1,738 cars during the week, leaving a balance of only 8,219 cars of unshipped business on the books of the mills. This places the West Coast industry in better condition, so far as car business is concerned, than it has been in for nearly a year.

The remainder of the statement follows:

A letter from Seattle, Wash., published in the Philadelphia Ledger of Friday, August 2, says that Eastern retail lumber dealers have become somewhat indifferent about replenishing their fall stocks with promptitude as they are relying upon the idea that cars will be in plentiful supply during the winter and that they will be able to get delivery as they may need it. The directors of the Transportation and Traffic Divisions of the United States Railroad Administration assert that those who are likely to require goods during the coming winter will do well to have them shipped while cars are in abundant supply and prompt transportation can be relied upon. They say that while every effort will be made to meet any legitimate demand for transportation it is well not to forget that priority will have to be given to the shipment of coal and many other essentials during the winter, and that those who are likely to require goods that must be shipped from distant points by rail will do well to lay in the necessary stocks while the transportation facilities of the country are in good working order, and before the rigors of a possibly severe winter shall interfere as they must with the movement of trains and the loading and unloading of cars.

328,959 More Cars of Coal Handled This Year

The Railroad Administration is now issuing to the press a weekly statement showing the coal car movement, similar to that on coal production issued by the Geological Survey. The report issued August 2 covers the week ended July 20 and shows a total movement during the week of 270,434 cars, compared with 237,531 in the same week of last year. The figures are divided as follows:

	1918	1917
Total cars bituminous.....	225,771	192,147
Total cars anthracite.....	40,664	42,840
Total cars lignite.....	3,999	2,544
Grand total cars all coal.....	270,434	237,531

A summary of the decreases and increases in coal loaded since January 1, 1918, up to and including the third week of July, 1918, as compared with the same periods of 1917 follows:

	Decrease	Increase
January	79,172 cars	.....
February .....	.....	31,150 cars
March .....	.....	46,613 cars
April .....	.....	73,408 cars
May .....	.....	84,998 cars
June .....	.....	88,840 cars
First three weeks of July.....	.....	83,022 cars
Increase, 1918 over 1917, 328,959 cars.		

* * *

The Car Service Section announces the appointment, effective August 1, of H. J. German as acting manager, Eastern Railroads Car Pool, with office in the Union Arcade building, Pittsburgh, Pa., to succeed F. G. Minnick, resigned to accept appointment as operating assistant of the Pittsburgh & Lake Erie, the Lake Erie & Eastern Railroad, and the Monongahela Railway.

* * *

The car ferry lines on Lake Michigan operated by the Pere Marquette, the Grand Trunk and the Ann Arbor have all

been placed in charge of Frank H. Alfred, federal manager of the Pere Marquette.

* * *

L. G. Scott, comptroller of the Wabash, has been appointed acting treasurer of the United States Railroad Administration, succeeding A. D. McDonald (vice president and comptroller of the Southern Pacific), acting treasurer, resigned, effective July 26.

* * *

The Central Advisory Purchasing Committee, Henry B. Spencer, chairman, has moved its offices from room 614, Interstate Commerce Commission building, to room 704, Southern Railway building.

Results of Signal Department Reorganization on Rock Island

By J. Arthur Hofmann

Chief Clerk, Signal Department, C. R. I. & P., Chicago, Ill.

PRIOR to 1915 the general organization of the signal department of the Chicago, Rock Island & Pacific provided for each operating division one signal supervisor who reported to the division superintendent. This signal officer had as assistants from one to three maintenance foremen who were in direct charge of the maintainers, battery-men and lampmen in the territory assigned to their jurisdiction. Supervisors had jurisdiction over more than one operating division on some of the outlying territories where comparatively little signalling was in effect. These territories ranged from a mileage of 430 to 2,741, while the territories under the jurisdiction of a signal supervisor east of the Missouri River ranged from 24 miles up to as high as 1,564. The maintenance foreman had on an average 130 miles of territory to look after.

On double track territory maintainers were assigned an average of 20 miles of territory, including approximately 24 automatic block signals, one 24-lever mechanical interlocking plant and 4 crossing bells. They were given a longer territory where they had no interlocking plants

TERRITORY BEFORE AND AFTER REORGANIZATION			
SINGLE TRACK			
Before		After	
12 to 15 miles		35 miles	
16 to 18 automatic signals		42 automatic signals	
1 mechanical interlocking		1 mechanical interlocking	
2 crossing bells		4 crossing bells	
DOUBLE TRACK			
20 miles		28 miles	
24 automatic signals		35 automatic signals	
1 mechanical interlocking		1 mechanical interlocking	
4 crossing bells		6 crossing bells	

to maintain and were handling only automatic signals, this territory being an average length of 27 miles with approximately 30 signals. A batteryman was assigned territory averaging about 27 miles, including 30 signals. This territory was not always under the jurisdiction of one maintainer, as in some cases it overlapped on two maintainers' sections. This was likewise true with reference to the territory of the lampman, who covered an average of 30 miles with approximately 35 signals to look after.

On single track, the territory assigned to one maintainer averaged 12 to 15 miles, with approximately 16 to 18 automatic signals. A maintainer having territory approximately 12 miles in length had included 1 mechanical interlocking plant and approximately 2 crossing bells to maintain, while the maintainer with 15 miles of territory covered automatic signals only. The maintainers on the single track territory

were assigned no regular help. Under the organization as outlined above the line and track circuits were operated from gravity cells and the maintainers were not using motor cars to any great extent, although some did buy their own cars in 1914.

By introducing the use of motor cars and using Lalande cells on line and track circuits it appeared feasible to reorganize the signal department forces, the reorganization being made effective for the system on May 1, 1915. This reorganization reduced the number of maintenance foremen and the practice was discontinued of using them as chief maintainers, as under the new plan they were then assigned as division inspectors to watch such details of maintenance and cover that part of the work with which the signal supervisor could not keep constantly in personal touch.

The reorganization provided for no change in the supervisor's territory. On double track territory the maintenance foreman was assigned approximately 170 miles, having 225 signals with an average of 2 mechanical interlocking plants and 57 crossing bells. A maintainer was assigned approximately 28 miles with 35 signals and an average of 1 mechanical interlocking plant and 6 crossing bells.

On single track territory the maintenance foreman was assigned approximately 360 miles with 440 signals and an average of 6 mechanical interlocking plants and 27 crossing bells. A maintainer was in charge of about 35 miles of line with 42 signals with an average of 1 mechanical interlocking plant and 2 crossing bells. This mileage was based largely upon what was felt to be a maximum distance for good maintenance and for the bad weather conditions which would necessarily exist in winter.

Under the old plan of organization with one man to a section it was recognized that very little opportunity existed for educating men to be maintainers, and when a new maintainer was needed it was generally necessary to appoint some one from the construction forces. Under the reorganization each section was in charge of a maintainer who had under his direction a helper; each of these men being provided with a motor car. By this method a man was being educated on each section to fill a maintainer's position at a later date. The motor cars previously purchased by the maintainers, some of which were bought on the partial payment plan, were taken over by the railway company after an appraisal as to the value, and the maintainer was reimbursed for the amount he had paid less depreciation, the railroad company assuming the balance of the indebtedness, if any, and settling this direct with the motor car companies.

The general use of motor cars made it necessary to provide additional housing for the cars and likewise arrangements had to be made for storage space for gasoline. While only a few of the public utilities commissions of the various States through which the Rock Island lines operate require audible warning devices installed on motor cars, all cars on the system have been equipped with either an 8-inch gong or a Klaxon horn.

The maintainers and helpers were located as near the center of their section as was possible, this, of course, depending upon the telegraph facilities existing on each particular section. The maintainer was directly responsible for the territory assigned to him, the helper reporting to the maintainer. In addition to their other duties these men take care of all signal lights, including switch lamps and automatic signal territory on the main line, except where extensive yards exist, when other provision is made for the yard lamps.

Under the plan of the reorganization, each maintainer received an increase of \$5 per month, which was later added to by reason of general increases to employees on the system. His helper was paid at the rate of \$60 a month, which was later increased for like reasons.

Due to the reorganization and taking into consideration the advance in pay to the field forces by reason of the general increase to the employees of the road, a saving has been effected of \$23,702.50 per annum. A greater saving could, of course, be shown if figured on the basis of the rates of pay in effect prior to the reorganization in 1915, and by not taking into account the general increases which have been made by the company since.

Not only has the reorganization effected the above economy, but a better signal performance is the result. While the latter is in a measure due to improved track conditions, it is felt that a large percentage is assignable to the reorganization which includes regular monthly meetings of the supervisors, together with monthly meetings of the signal engineer's staff, all of which co-ordinate the various activities of the men and tend to work to the improved service accomplished under this reorganization.

TABLE ILLUSTRATING ASSIGNMENT OF MEN ON SINGLE TRACK TERRITORY
MISSOURI DIVISION

MISSOURI DIVISION

Head- quarters	Position			Territory	No. aut. sigs.	No. Xing. bells		Number intr'lg. plants	Number wk'g. levers	
	Mt'r.		Helper			In aut. ter.	Non- aut. ter.			
	D.	N.						D.	N.	P. to P.	Pwr.	Mech.
Muscataine	1	..	..	..	185.9- 216.6	39	..	..	2	31
Muscataine	1	..	1	..	Culver	39	..	..	2	31
					Nahant .....	..	..	..	..	..
Columbus Jct.	1	..	..	..	216.5- 256.0	46	2	..	..	..
Columbus Jct. ....	..	..	1	..	216.5- 256.0	46	2	..	..	..
Fairfield	1	..	..	..	255.9- 282.4	30	..	..	1	46
Fairfield .....	..	..	1	..	Fairfield ..	30	..	..	..	46
Eldon	1	..	..	..	282.1- 313.8	44	1	2	2	33
Eldon .....	..	..	1	..	Libertyville	44	1	2	2	33
					Belknap ..	..	..	..	..	..
Centerville ...	1	..	..	..	313.1- 344.2	40	1	..	..	28
Centerville ...	..	..	1	..	Centerville.	40	1	..	1	28
Allerton	1	..	..	..	344.1- 385.6	44	2	..	..	..
Allerton .....	..	..	1	..	344.1- 385.6	44	2	..	..	..
Trenton	1	..	..	..	385.1- 425.8	50	6	..	..	..
Trenton .....	..	..	1	..	385.1- 425.8	50	6	..	..	..
Altamont	1	..	..	..	426.7- 462.8	51	4	..	..	..
Altamont .....	..	..	1	..	.....	51	4	..	..	..
Rushville	1	..	..	..	499.2- 513.5	32	..	3	..	..
Beverly	1	..	..	..	Beverly ..	..	..	..	2	43
					Stillings Jct.	..	..	..	..	..
					4 Staff Mach.	..	..	..	..	..

TABLE ILLUSTRATING ASSIGNMENT OF MEN ON DOUBLE TRACK TERRITORY
ILLINOIS DIVISION

Head- quarters	Position		Territory	No. aut. sigs.	No. Xing. bells		Number intr'l g. plants		Number wk'g. levers
	Mt'r.	Helper			In aut. ter.	Non- aut. ter.	Pwr.	Mech.	
Mokena	1	..	M. P. to M. P.	30	4	..	..	..
Mokena	..	1	..	30	4	..	..	..
Joliet (MC)	1	..	Mich. Cent.	..	..	..	1	..	88
Joliet (MC)	..	1	Mich. Cent.	..	..	..	1	..	88
Joliet (UD)	1	..	Union Depot	..	..	..	1	..	193

Joliet (UD)	..	1	..	Union Depot	..	..	1	..	193
Joliet (UD)	..	1	..	Union Depot	..	..	1	..	193
Morris	..	1	..	40.0-77.16	43	6	..	..	..
Morris	..	1	..	40.0-77.16	43	6	..	..	..
Ottawa	..	1	..	77.16-99.25	29	5	..	..	28
Ottawa	..	1	..	77.16-99.25	29	5	..	..	28
Bureau	..	1	..	98.35-129.25	41	5	..	..	..
Bureau	..	1	..	98.35-129.25	41	5	..	..	..
Sheffield	..	1	..	129.0-165.4	39	13	..	..	..
Sheffield	..	1	..	129.0-165.4	39	13	..	..	..
Silvis	..	1	..	165.2-180.3	29	3	..	..	17
Silvis	..	1	..	165.2-180.3	29	3	..	..	17
Davenport	..	1	..	180.3-183.3	14	10	..	..	8
Peoria	..	1	..	Mo. Div. Jct.	..	..	..	..	..
				Bureau to	..	..	..	..	..
				Peoria	..	11	..	..	..
				Peoria to R.I.	..	..	..	..	..
				Peoria	..	2	..	..	29

Inland Traffic Division of War Department Expanded

BRANCH AND DISTRICT OFFICES in charge of experienced freight traffic men are the chief features in the expanded organization of the inland traffic division of the war department, announced last week in Circular 2-A by H. M. Adams, manager of inland traffic for the department.

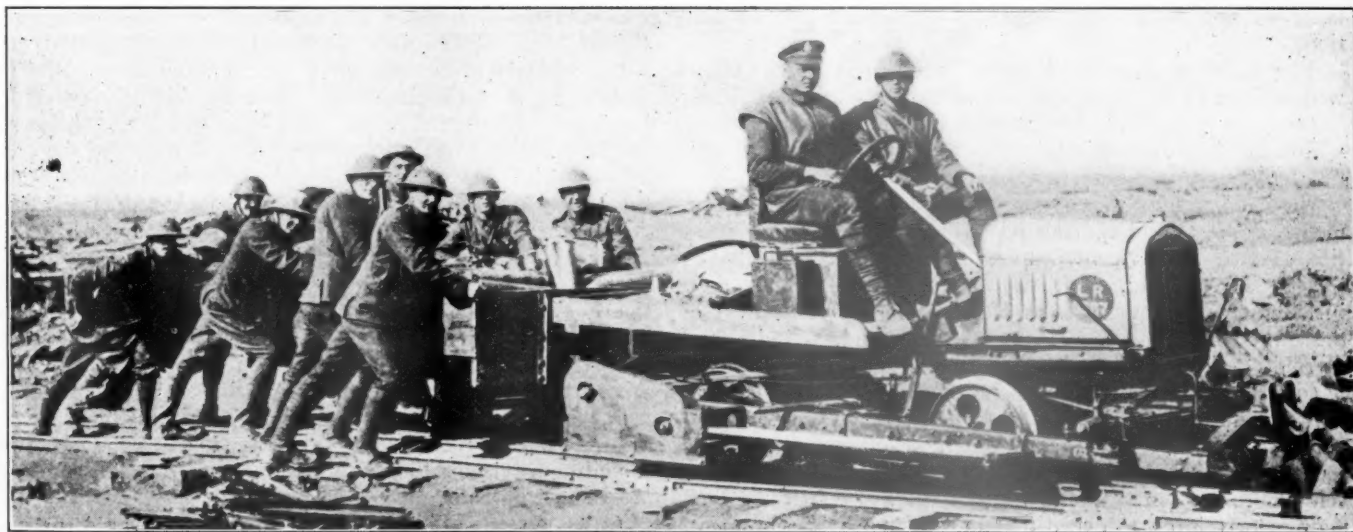
The circular announces the appointment, effective August 1, of the following inland traffic officers:

BRANCH OFFICES REPORTING TO THE CHIEF, INLAND TRAFFIC SERVICE, WASHINGTON, D. C.

Location	Assistant chief—Name and address	With supervision over district office at
Atlanta, Ga.	A. S. Edmonds, Forsythe Building	Charlotte, N. C.
Boston, Mass.	J. E. McGrath, No. 25 Huntington Avenue	Jacksonville, Fla.
Chicago, Ill.	R. B. Robertson, Southern Pacific Building, 35 West Jackson Boulevard	Birmingham, Ala.
New Orleans, La.	N. C. Barnett	Peoria, Ill.
New York, N. Y.	B. M. Flippin, Room 527, 45 Broadway	Toledo, Ohio.
Pittsburgh, Pa.	J. E. Weller, Chamber of Commerce Building	Dallas, Tex.
St. Louis, Mo.	C. H. Morrill	Albany, N. Y.
		Buffalo, N. Y.
		Cleveland, Ohio.
		Cincinnati, Ohio.
		Indianapolis, Ind.
		Kansas City, Mo.

DISTRICT OFFICES REPORTING TO CHIEF, INLAND TRAFFIC SERVICE, WASHINGTON, D. C.

At—	Name of person in charge and address	Reporting to—
Baltimore, Md.	Capt. S. A. Tubman (acting) Lexington Building	Washington, D. C.
Norfolk, Va.	J. F. Dalton	Washington, D. C.
Philadelphia, Pa.	J. B. Trimble, Widener Building	Washington, D. C.
Portland, Ore.	W. C. Diblee	Washington, D. C.
Richmond, Va.	G. A. Craig	Washington, D. C.
San Francisco, Cal.	F. L. Hanna, Southern Pacific Building	Washington, D. C.



Copyrighted by Press Illustrating Service

A Motor Trench Tramway Behind the British Lines

DISTRICT OFFICES REPORTING TO BRANCH OFFICES

At—	Name of person in charge and address	Reporting to—
Albany, N. Y.	C. E. Harris, Room 1, Post-office Building	New York, N. Y.
Buffalo, N. Y.	A. P. Wakefield, Room 530, Federal Building	New York, N. Y.
Birmingham, Ala.	R. M. Dozier	Atlanta, Ga.
Cleveland, Ohio	Leonard Smith	Pittsburgh, Pa.
Cincinnati, Ohio	W. H. Connor, 314 Post-office Building	Pittsburgh, Pa.
Charlotte, N. C.	C. Sanderson, 202 Mint Building	Atlanta, Ga.
Dallas, Tex.	John D. Gowin	New Orleans, La.
Detroit, Mich.	A. J. Dutcher	Chicago, Ill.
Indianapolis, Ind.	G. W. Smith, 314 Post-office Building	Pittsburgh, Pa.
Jacksonville, Fla.	Willis Callaway, 707 Heard Nat'l Bank Building	Atlanta, Ga.
Kansas City, Mo.	J. L. Hohl	St. Louis, Mo.
Peoria, Ill.	Chas. Shackell	Chicago, Ill.
Toledo, Ohio	P. B. Doddridge, 415 Ohio Building	Chicago, Ill.

Several of the assistant chiefs in charge of the newly created branch offices held positions as railway traffic department officers. A. S. Edmonds, assistant chief at Atlanta, was formerly assistant freight traffic manager of the Missouri Pacific. R. B. Robertson, assistant chief at Chicago, is assistant general freight agent of the Chicago, Indianapolis & Louisville at Chicago. N. C. Barnett, assistant chief at New Orleans, was assistant general freight agent of the Gulf Coast Lines, with headquarters in that city. J. E. Weller, who will be in charge at Pittsburgh, is general western freight agent of the Pennsylvania-Northwest system, and C. H. Morrill at St. Louis was assistant freight traffic manager of the St. Louis-San Francisco. Several of the heads of the district offices were also prominent officers in railway traffic departments.

The remainder of the circular outlining the duties and functions of the officers, with the exception of that part outlining the boundaries of the several branches and districts, is as follows:

The services of the branch and district offices are available to all bureaus of the war department alike and their activities will be exercised in connection with property of all such bureaus without preference or prejudice. Direct communication with representatives of the inland traffic service is authorized.

The duties of those in charge of branch and district offices with respect to the transportation of troops are as follows:

The movement of troops is directed from the office of the chief, Inland Traffic Service, through the troop movement section of the United States Railroad Administration. Therefore, branch and district offices will have no duties in connection therewith except such as may be delegated by special instructions, issued from time to time. They will, however, render assistance at all times when required by the officer in charge and will promptly report to and await instructions from the chief, Inland Traffic Service, in any case of importance coming to their notice, requiring advice and instruction.

The duties of those in charge of branch and district offices with respect to the transportation of property are as follows:

(a) To represent the Inland Traffic Service in all matters within its jurisdiction, subject to the established rules and regulations.

(b) To promptly and effectively respond to all requirements of the War Department, pertaining to the transportation of War Department property, inland and coastwise.

(c) To respond, with respect to matters within their jurisdiction, to requests from officers and representatives of the United States Railroad Administration and the individual carriers, including water lines.

(d) To perform all duties pertaining to the transportation, inland and coastwise, of all property of the War Department moving by express, freight or otherwise, and the routing thereof, beginning with the ordering of cars or other vehicles for use in shipping the property, also including all matters pertaining to expedition or preference in movement, tracing, checking of railroad yards, instructions to carriers with respect to the movement of war department property, including the disposition of shipments on arrival at destination,

all other relations with the carriers, switching service and questions pertaining to transportation as distinguished from the concentration and shipping of the property and the acceptance or storing or otherwise disposing of it on arrival at destination; will require prompt acceptance of the property, unloading of cars and accomplishment of bills of lading.

(e) To exercise special supervision over the shipment of property by express and to substitute freight service when practicable.

(f) To inform themselves with respect to the service available by inland and coastwise waterways, and the rates applicable, and to encourage the movement of the maximum amount of property via such routes when safe and practicable and the expense therefor is not in excess of the expense for movement by rail, including cartage and considering land-grant deductions. Any departure from the latter rule must be approved by the Chief Inland Traffic Service.

(g) To confer with officers and agents of the carriers, to insure the prompt movement to its destination of all property of the war department being delayed en route; to report to the consignee and to the Chief Inland Traffic Service, through the proper channels, the action taken in all such cases; and for such other purposes as may be necessary.

(h) To keep themselves informed at all times with respect to the conditions at important railway centers and junction points, transfer depots, etc.; to prevent, so far as possible, delay in the movement of war department property; and to promptly report any congestion of facilities resulting in delay in the movement of such property, and, if known, the causes therefor.

(i) The United States Railroad Administration having established at Washington (Nineteenth street and Virginia avenue) a car record bureau wherein the shipment, interchange, junction passing and arrival at destination of government shipments in carloads are recorded, that record will be resorted to in so far as may be practicable in the tracing of delayed shipments.

The Inland Traffic Service maintains in connection with this record and in the same building its tracing section, with which direct communication is authorized.

(j) Branch and district offices may, when necessary and expedient, trace delayed shipments through local railroad offices within their respective territories or districts. It is especially directed, however, that preference be given to the handling of all tracers for both carload and less than carload shipments through the Washington office.

(k) Expediting the movement of important shipments shall at all times be distinguished from the matter of tracing and effecting delivery at destination of shipments delayed in transit. Branch and district offices are authorized to arrange direct with the proper officers of the carriers interested for the movement of such shipments when moving wholly within the territory assigned to the branch in which the shipments originate. All other requests must be submitted to the office of the Chief, Inland Traffic Service, Washington, for transmission to the car service section of the United States Railroad Administration.

(l) To give especial attention to the conditions at the ports of export, to insure prompt delivery of all property to the consignee upon arrival, prompt unloading of cars, prevent the incurring of demurrage charges or the accumulation of property in excess of the facilities available to store or otherwise care for it, obtain reports from the carriers of all shipments held for disposition and to inform the Chief, Inland Traffic Service, periodically as required, as to the situation, including advice as to the ability of the responsible officer to accept and unload property on arrival.

(m) To exercise such other functions and perform such other duties as may be prescribed by the Chief, Inland Traffic Service, War Department, or by his authority, from time to time.

(n) To report to the Chief, Inland Traffic Service, through the proper channels, all failures to observe the orders, rules and regulations of the Inland Traffic Service.

The following territorial assignments are made:

Assistant chiefs in charge of branch offices will have general supervision over all territory assigned thereto and will also have direct charge of the details of operations in the territory assigned to their respective branches and not assigned to districts therein.

High Capacity Cars on a Narrow Gage Railway in India

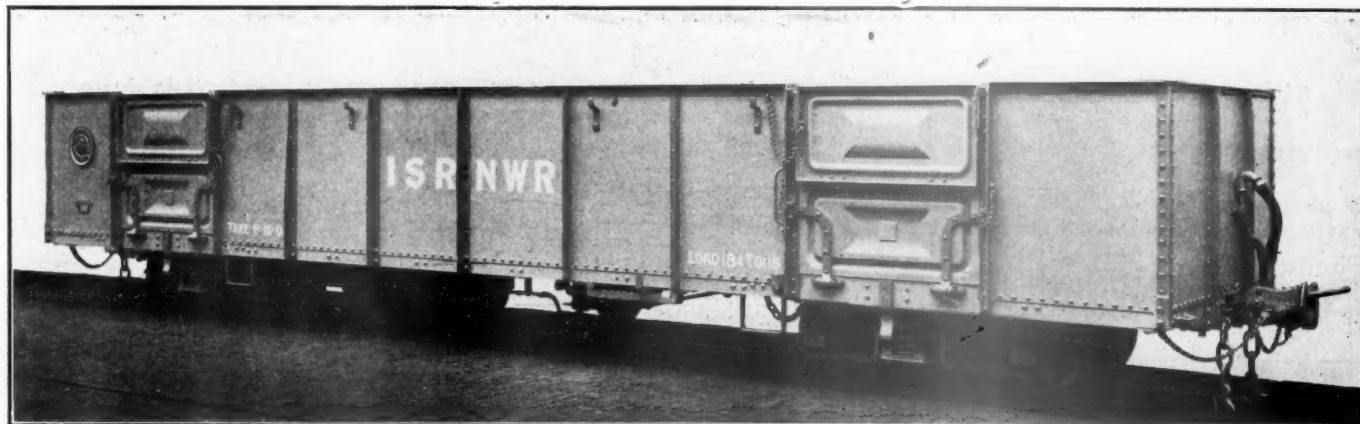
By Frederick C. Coleman

BY FAR THE MOST interesting of all the mountain railways in India, or perhaps in the Far East, is the 2 ft. 6 in. gage line connecting Simla, the summer capital of India and the Punjab and the headquarters of the Indian Army all the year round, with Kalka, and there forming a connection with the East Indian Railway system.

Simla, situated among the foot-hills of the Himalayas at an

been worked by the Indian North Western State Railway administration. It has a total length of 60 miles of single track throughout. The permanent way consists of 41 lb. flat-footed steel rails, with spikes and bearing plates on wooden deodar ties, but more than half of these have now been replaced on renewal by 60 lb. rails. The line is ballasted with stone, and it is fenced only along the Kalka camping ground and through the outskirts of the town of Kalka.

Most of the curves are compound, the limiting radius being 120 ft. and the ruling grade is 3 per cent, not compensated for curvature. Upon leaving the Kalka junction, where the broad-gage trains stop, the line almost immediately commences to ascend the spurs of the mountains, taking turns continuously until Simla is reached. The spurs are generally of a favorable character and they are taken advantage of when they lie in the right direction, but, where they do not, tunneling has been resorted to. The ridges are connected by "saddles" of varying heights, not always progressive in favor of the ascent, so that the line, having surmounted a ridge, has sometimes to descend. However, as the mountains rise, so do the majority of the "saddles." In spanning mountain gorges and ravines, girder viaducts are not usually employed, but masonry structures called "galleries." These resemble



Narrow Gage Gondola Car of the Sheffield-Twinberrow Type for the Kalka-Simla Railway

altitude of 7,116 ft., relied, until November, 1903, upon "tongas," or country carts, for its communication with the outer world. The railway was commenced in 1899 and opened for traffic in 1903, and since January 1, 1907, it has

Roman aqueducts, and they consist of tiers of arches rising one above the other until the rail level is reached. They are generally on a curve, and the curvature is formed by making the piers wedge-shaped. The retaining walls are made of dry



Box Car with Sheffield-Twinberrow Underframe and Trucks for the Kalka-Simla Railway

stone, hand set, of 10 ft. to 15 ft. in width, and bands of masonry 2 feet wide are introduced at intervals of about 5 feet, according to circumstances. There are no fewer than 21 stations, and the railway carries about 150,000 passengers and 62,000 tons of goods each year.

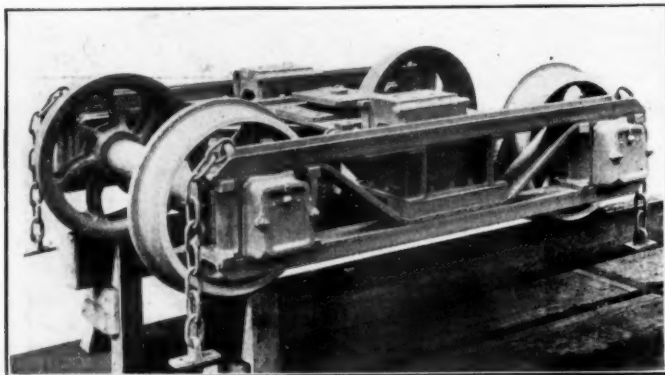
In order to provide facilities for the increasing traffic, additional locomotives of a more powerful type have recently been introduced, the passenger vehicles have been re-designed, and all-steel coaches have largely been adopted.

Simultaneously, a considerable number of all-steel high-capacity freight cars, both open and covered, have been imported from England. Among these are 50 cars of the Sheffield-Twinberrow pattern, built by the Leeds Forge Company, Limited, of Leeds, England, from the designs of George H. Sheffield, of Victoria street, Westminster. They are of two standard types, open and covered, of 42,560 lb. and 39,200 lb. rated capacity, respectively.

The following is a table of the leading dimensions of the open cars:

Length inside and over end sills.....	30 ft.
Length over buffers and couplers.....	33 ft.
Height inside.....	3 ft. 6 in.
Width inside.....	7 ft.
Width overall.....	7 ft. 5 1/4 in.
Centres of trucks.....	20 ft.
Wheelbase of trucks.....	4 ft. 3 in.
Diameter of wheels on tread.....	10 ft. 8 in.
Size of journals.....	7 in. by 3 1/4 in.
Centres of journals.....	3 ft. 9 3/4 in.
Tare weight complete, including vacuum brake equipment.....	14,000 lb.

The over all dimensions, with the exception of the height, are similar in both types of cars and, with the single exception of pressed steel end sills and end longitudinals, only three standard British steel sections are employed in the structures. Cast steel wheels are employed, and these were pressed on the axles under a pressure of 40 tons, the bosses of the wheels being keyed to the axle seats. The journal boxes are also of cast steel and are fitted with loose key plates and are designed to permit of oil lubrication, either by means of adjust-



Truck of the Sheffield-Twinberrow Type Used Under Some of the Kalka-Simla Freight Cars.

able pads or waste packing. The tare weight of the covered cars is 15,350 lb. A number of the covered cars are fitted with water tanks, each of 115 cu. ft. capacity. The weight of the empty tanks and fittings is 1,456 lb. The trucks, underframes and general dimensions of the covered cars are identical with the open cars, but an additional standard British section is employed for the longitudinals and the transverse bracing of the plates and of the roof.

One of the photographs shows the Sheffield-Twinberrow patent truck. The salient feature of this design of truck is that the weight of the car is not carried on the centre, but is distributed through groups of coil springs at a transverse distance of about 16 in. from each side of the centre. The bending moments upon the main transoms are thus considerably reduced, and the effect is to add materially to the reduction in weight of the structure. The springs are compounded

to act efficiently when the car is either loaded or empty. They rest in cast steel boxes, the lower parts of which are attached to and between the bogie transoms or bolsters. The upper, or loose, portions of the boxes are provided with large rubbing surfaces, which have a sliding contact, with corresponding rubbing pieces upon the car main transoms. Although tilting action alone is allowed for to the extent of the clearance between the centre pins and pivot casting, and the spring boxes and the side checks on the bolster frames of the trucks, there is ample provision for lateral and end movement to suit inequalities in the rails or super-elevation.

A distinct advantage in dispensing with the customary swing bolster is the fact that there is no vertical movement of the brake shoes, whether the car be empty or loaded. A uniform wear of the brake shoes is thus ensured and there is the same range of brake levers under either empty or loaded conditions. The weight of these trucks, complete, is 2,556 lb. Some of the covered cars are provided with an additional pair of doors at the top in the centre, as shown in one of the illustrations, and the tare weight of the cars is increased to 15,340 lb.

Several of the open and covered cars recently supplied for use on the Kalka-Simla Railway are fitted with an arch bar truck. The general dimensions of these cars and the structural details are similar to those already described, except that the weight of the truck is 3,192 lb., which increases the tare weight of the cars to 15,120 lb. and 16,910 lb., respectively, as against 14,000 lb. and 15,340 lb., the tare weights of the open and covered cars fitted with the Sheffield-Twinberrow truck.

Railway Supplies and Commissions

THE RAILWAY BUSINESS ASSOCIATION, through its committee on government purchasing policies, has sent the following letter to its members under the title of "Selling Agencies":

"We are informed that the Federal Department of Justice and the Division of Finance and Purchases of the Railroad Administration has under consideration the question whether established and legitimate selling agencies shall be exempt from the contract provision intended to prohibit agencies organized for the purpose of exacting a special profit. Members of the Railway Business Association who petition for relief from effects of the proposed contract clause are of two classes: (1) selling agencies; (2) makers who employ selling agencies.

"The evidence which will best aid the attorney general and the director of purchases in a wise and just determination is a description of the types of selling agencies which claim to be legitimate, with emphasis upon the points which distinguish those types from the class of agencies which the government seeks to stop. The most effective form in which such evidence can be presented to the government is letters from agents or principals, each telling his story in his own way. You are invited to write such a letter. It is suggested that replies be prompt.

"The attorney general rests his recommendation upon decisions of the supreme court which have pronounced unenforceable and illegal contracts for contingent fees in connection with furnishing supplies to the government, on the ground that they are contrary to public policy by reason of the tendency to which they give rise. The recommendation of the attorney general was that contracts made by any department of the government contain a clause by which the contractor warrants that he has employed no third person to obtain the contract upon contingent compensation or paid no brokerage, commission or percentage upon the amount receivable; breach of the warranty to constitute cause for annulment of the contract. Some of the railroad regional pur-

chasing committees have issued the attorney general's recommendation as a guide to railroad purchasing officers.

"The Railway Business Association has addressed a letter to the attorney general calling his attention to the various types of selling agencies whose legitimacy has never been questioned, the theory being that a maker might as properly employ an agency as an individual salesman to market his goods. This letter makes the suggestion that a speedy understanding of the government's precise purpose would be of substantial benefit since those engaged in conducting sales companies doubt whether under the recommended covenant they may do any more business, while makers, if agencies are prohibited, must develop other sales mechanism. Supplementing this formal communication by informal inquiries we receive the impression that established agencies were not within the scope intended and that information in the form of facts will be useful.

"Your situation, if you acquaint us with it, will be laid before the authorities at an early moment."

Orders of Regional Directors

COURTESY TO THE PUBLIC.—The reduction in service due to war necessities and the elimination of competition created a growing feeling on the part of the public that there is a lack in attentiveness and courtesy on the part of railroad employees and subordinate officers in their contact with patrons. Intelligent, prompt and energetic action is urged to remove any real occasion that there may be for this feeling. A number of suggestions are made as to course of action which should be taken to this end, among which are: (a) The appointment of "Four Minute" men on each division and particularly in each large terminal, taken from amongst the older officers and employees, to give short snappy talks to railroad men who come in frequent contact with the public, outlining the aims of the Administration in the direction of efficient and prompt service to the public, courteously rendered; (b) A close study of the needs of individual ticket offices to determine whether an increase in the number of ticket windows and employees is necessary or whether a floorwalker should be supplied to discover and adjust peoples' needs and troubles and to assist them in securing tickets and accommodations; (c) Close attention to neatness in uniforms or personal appearance of representatives of the Railroad Administration coming in contact with the public; (d) The maintenance of railroad property where the public transacts business with the railroad administration in a clean and businesslike condition. This applies particularly to passenger and freight stations and means that windows should be washed, floors cleaned, lavatories disinfected properly, well lighted, and public conveniences kept in first-class order at all times.

Sleeping Car Reservations.—Hereafter railroad agents or representatives will not pay for telegraph or telephone messages covering sleeping, parlor car or steamer reservations. When such messages are sent by railroad representatives passengers will be required to pay the established charges for the necessary telegraph or telephone service in both directions, except that the wires of railroads under government control may be used locally or jointly without charge under the following conditions: (a) The accommodations will be secured only in connection with a continuous trip, a reasonable time—not to exceed 12 hours—being allowed for train connections at points where transfers to sleepers are made. (b) A sleeping, parlor car or steamer berth ticket or order therefor covering accommodations must be purchased at the time that they are secured. (c) For delivery of the sleeping or parlor car or steam berth ticket, the agents to whom application is made for the accommodations shall require the

presentation or purchase of a ticket good from his station to or beyond the destination to which the reservation is made. Assignment of space to offices located off the line of sleeping and parlor car runs must not be made.

Transportation of Laborers.—In Circular No. 47, dated July 30, the regional director of Southwestern railroads says: "Supplement No. 5 to Circular No. 63 issued by the regional director of Northwestern railroads stipulates that the payment of fare for laborers from labor markets to the point needed and their return fare to the point where employed may be continued, but that this practice will not be considered as an allowance that will have the effect of increasing compensation. We interpret this rule as applying to the payment of fare over connecting or intermediate roads and that free transportation may be issued only over the lines of the employing road as they existed prior to Federal control—that is, for example, men for service on the Missouri, Kansas & Texas at Dallas may be moved dead-head over the Missouri, Kansas & Texas from St. Louis, but where intermediate lines are used fares should be paid; for instance, men moving from St. Louis for service at Longview, Texas, on the Texas & Pacific should pay their fare from St. Louis to Texarkana."

Dynamometer Car.—The Southern regional director announces in Circular No. 358 that the all-steel dynamometer car owned by the Nashville, Chattanooga & St. Louis has now served its purpose on that road and is available for use on any of the railroads under federal control.

Reports of Traffic Movements.—In order that facilities of the Southern Region may be used to the greatest advantage, the regional director has asked each federal and general manager to give him on the first and fifteenth of each month a statement as to what proportion of main lines or routes under their jurisdiction are not handling as much tonnage at present as they were last year or, if more is now being handled, over what part of the lines this heavy movement has occurred. He also wants reports as to unbalanced movements and suggestions as to the best means of remedying them, and wire or other immediate reports of unusual changes or unusually heavy movement of empty cars.

Hours of Service Law.—Employees have been penalized for violation of the hours of service law because of the misunderstanding of Article 1 of General Order No. 8. It should be understood that the officers and agents of carriers who are liable to the penalties provided in the act are those who have official direction or control of the employees; and that the penalties do not attach to the employees who, subject to such supervision or control, perform the service prohibited, under instructions. It should be thoroughly understood, however, by all employees, the circular states, that before becoming a party to a violation of the law, it is their distinct duty to notify the officer of an impending violation of the hours of service law, and which may have been overlooked by the officer at the time in charge of the handling of the men involved.

Publicity Agents.—The Southern Regional Director in Circular 354 has asked for a list of the publicity men employed by the railroads in his jurisdiction. This list is to show the name, salary, estimate of expenses, and the functions performed and will include not only men actually designated as publicity agents, but employees with other titles who perform publicity functions. The circular says: "Under present conditions, it is difficult to see any justification for publicity agents whose salaries and expenses are charged to operating expenses. Please, therefore, indicate which, if any, of the men included in your list you think ought to be retained in service and give the reason for your belief that they should be so retained."

Wage Increases.—In circular letter No. 355 the Southern director draws attention to the fact that in the case of men jointly employed by several railroads, some of which are un-

der government control and others which are not under government control, the increases in pay under General Order No. 27 will apply, even though in some instances the actual pay check may be issued by the railroad not under government control.

Rental Charges for Locomotives.—Circular letter No. 356 issued by the Southern director says that until such a time as a uniform basis has been arrived at, the rental rate for leased or loaned locomotives of one mill per pound tractive effort per day, with a minimum charge of \$25 per day, will be used.

Loss and Damage.—The Eastern regional director is calling for a report of payments for loss and damage claims paid during the first six months of 1918 and caused by insecure packages.

Agents' Funds, Paying Payrolls, and Bank Accounts.—The Eastern regional director is asking for a statement of the practices in effect concerning (a) method of remitting agents' funds, (b) method of paying payrolls, and (c) bank accounts that should be maintained. It is desired to make a careful study of these practices with a view to determining the practicability or desirability of adopting uniform methods.

Conserving Materials.—The Eastern regional director directs attention to the necessity of reclaiming as far as practicable all iron and steel parts and suggests that the use of oxy-acetylene and electric welding outfits should be increased.

Bonds for Use as Stores or Cellars as Warehouses.—In calling attention to section 2,961 of the revised statutes of the United States statutes, the Division of Law is arranging with the treasury department to give a general bond for the director general to execute covering this subject, and the railroads should, therefore, not execute such bonds as was formerly the practice.

Cars for Railroad Fuel Loading.—In Supplement No. 1 to Circular 42, dated August 5, the regional director of Central Western lines explains that the abolishment of assigned cars for railroad fuel loading is intended to affect only the distribution of cars as between mines, and is not intended to affect car service or interchange as between railroads. The purpose of the new arrangement is to avoid the working of some mines to full capacity while other mines in the same competing district work less than full capacity. It is therefore permissible for railroads to accept from their connections cars to protect their company coal lading. Mines owned by railroad companies and producing exclusively railroad fuel must be treated just the same as any other mine.

POSTAL AIR SERVICE BETWEEN BUDAPEST AND VIENNA was begun on July 4. Press despatches state that the Hungarian Minister of Commerce has suggested a similar service between Budapest and Odessa.

Meeting of Railway Claim Agents

THE ANNUAL MEETING of the Association of Railway Claim Agents was held at Hotel LaSalle, Chicago, on July 30. About 90 of the larger railroads of the United States were represented. J. H. Howard, supervisor of claims in the office of the general counsel of the Railroad Administration who until recently was general claim agent of Chicago & Alton at Chicago, delivered an address. He stated that interference by ambulance-chasing lawyers and crooked physicians in cases of injuries incurred on the railways will not be tolerated by the government. The Railroad Administration proposes to deal directly with claimants and to treat them fairly. When claimants insist upon legal advice their counsel will be limited to a reasonable fee. The policy of the administration will be to investigate fully each case of personal injury and to handle it strictly on its merits. Every effort, he said, would be made to introduce uniformity and economy in claim departments under federal control. In that connection he pointed out that some railroad claim departments handle only personal injuries while others handle all cases including claims for losses through fire and the injury and slaughter of live stock. It was Mr. Howard's opinion that a general claim department should handle all claims except freight claims and should also have jurisdiction over railroad surgical departments.

Mr. Howard read a letter to the association from Judge John Barton Payne, general counsel of the Railroad Administration, which stated that the federal authorities expect railroad attorneys to refrain from taking claims against other railroads. Likewise county, city and district attorneys, being employed in public service, should not take railroad claim cases, as such action would amount to working against the interests of another branch of the government. If any such attorneys persist in taking claims against the carriers it was suggested that they be reported to the regional director and through him to the legal department of the Railroad Administration at Washington.

A considerable part of the meeting was devoted to a discussion of trespassing and automobile crossing accidents which constitute the most serious problems confronting the claim departments. Attention was also directed to the large losses in food resulting from the slaughter of live stock on railroad right-of-ways and the destruction of grain by fire set out by trains. For instance, the loss in live stock killed on all railroads in Missouri in 1916 amounted to 11,612 animals representing a value of \$544,000. A number of members of the association told of the excellent co-operation given them by the Food Administration and the Council of National Defense, as well as by individual farmers, in cut-



Canadian Wounded on Their Way to Base Hospitals

ting down these losses. In some instances farmers have plowed fire guards inside and outside of the right-of-way to prevent the inception of conflagrations from locomotive sparks. In order to secure the assistance of the Railroad Administration in working out these problems and in order to effect the closest co-operation between the individual railroad lines and the federal authorities at Washington, a committee was appointed consisting of R. C. Richards, general claim agent of the Chicago & North Western at Chicago as chairman; Frank V. Whiting, general claims attorney of the New York Central Lines at New York; H. B. Hull, general claim agent of the Illinois Central, at Chicago; A. H. Mansfield, claims attorney of the Missouri Pacific, at St. Louis; and D. H. Kimball, general claim agent of the Great Northern, at St. Paul.

The following officers of the association were elected for the coming year: President, R. C. Richards, to succeed W. F. Every, general claim agent of the Northern Pacific at St. Paul, Minn.; first vice-president, John S. Douglass, general claim agent of the Gulf, Colorado & Santa Fe, Galveston, Texas; second vice-president, C. A. Theis, chief claim agent of the New York Central Lines at Chicago; third vice-president D. H. Kimball, to succeed J. J. Donahue of the Louisville & Nashville, Louisville, Ky.; secretary and treasurer, Willis H. Failing, claims attorney of the Central Railroad of New Jersey, Jersey City, N. J.

Special Meeting of Short

Line Association

THE SPECIAL MEETING of the American Short Line Railroad Association, held in the Homer Building, Washington, last Wednesday, considered principally the relations between the Railroad Administration and the short lines and considerable attention was paid also to the relations in general between the short lines and the government, in the matter of mail pay, etc.

Calls for the meeting were sent out by Bird M. Robinson, president of the association, to members and other short line carriers who would be interested. In the call to members he said that the meeting was called for two general purposes:

"First—To carefully and fully consider the emergency which now confronts the great majority of the short line railroads.

"Second—To alter or amend the articles of organization and by-laws, in any way and to any extent that may be deemed necessary; to adopt financial plans and policies for the future; to elect officers and necessary committees; to consider and act upon any proposition or suggestion that may be offered.

"The government control of all main or trunk lines, including their short-line subsidiaries, and the exclusion from such control of the great majority of the independently owned short lines, is having a distressing and dangerous effect.

"President Wilson and other officials have stated that the short lines are to be treated fairly, but so far nothing has been done that has been effective in affording necessary relief. The enforced absence of the director general has no doubt delayed matters to some extent. We are now advised that he will return to Washington on August 5 and will soon thereafter approve standard forms of contracts to be made with any and all railroads taken under federal control.

"We are advised that no contract has been made by the government with any railroad company, and that no contract will be made until after the director general returns and reports.

"We are of the opinion that it would be best for all concerned for the short lines to defer any attempt to negotiate a contract or to make permanent arrangements until the

meeting of the association on August 7; that every short line, whether retained by the government or relinquished, should be represented in that meeting, and that the delegates should then adopt such policy and recommendations as may to them seem wise, just and proper.

"This association has not at any time, and does not now, approve of any arbitrary, unfair or unjust demands upon the government; on the contrary, it has favored and now advocates doing everything possible to aid the government in solving the serious problem involved, in a way that will do the greatest good for all concerned. We have frequently tendered our services to the administration with that object in view, and will recommend that the coming meeting not only earnestly renew that offer, but that it openly condemn any road that is shown to be guilty of attempting to obtain an unfair advantage. The proposed delay in attempting to negotiate contracts would probably aid the administration as it would enable them to settle many questions that must be determined before any contracts are made.

"War conditions during the past fifteen months have prevented the association from having meetings in due course. Notwithstanding a continuation of such meetings, we believe it is necessary for the members to meet and consider the situation.

"Present conditions are such that the meeting herein called ought to be, and probably will be, the most important short line meeting ever held."

The meeting was called to order at 10:30 a. m. in the office of the Bureau of Railway Economics, Homer building, Washington. Mr. Robinson presided. E. C. Niles, chairman of the short line section of the Railroad Administration, spoke briefly on the relations between the administration and the short line railroads. Considerable attention was given to the report of the executive committee on the compensation contract, papers being read by Ben B. Cain, vice-president and general manager of the Gulf, Texas & Western, chairman of the committee, and by W. M. Blount, president of the Birmingham & Southeastern, another of its members.

A full report of this meeting will be given in our next issue.

Railway Notes from China

PEKING.

ON APRIL 17 occurred the first train "hold-up" in the history of China. The scene was a few miles west of Hsu Chowfu on the new Lung Hai line. The engineer of the west-bound express perceiving a large pile of stones on the track ahead brought his train to a stop in time to prevent accident. But as soon as the train slowed down it was greeted with a heavy rifle fire from all sides. After this preliminary salvo, the bandits wearing queues and faded out military uniforms, boarded the train taking all valuables from passengers, the baggage car and the express car. Three passengers who resisted were shot to death. Several were wounded by the preliminary fire. About a dozen were taken along to be held for ransom. There is little doubt that the robbers are former soldiers of the old monarchist Chang Hsun, leader of the fiasco of last July.

The Peking Hankow line by way of precaution is attaching an armored car to the four express trains passing daily over the section between Shuntchufu and Wushangkuan. Twenty soldiers armed with rifles and a machine gun compose the crew.

* * *

On the night of April 27 friends of G. A. Kyle, chief engineer of the Siems Carey Railway & Canal Company, made up a considerable party to meet him returning from his captivity. He was in the hands of the bandits 52 days. He was forced to make long marches at night. His shoes were taken away because of the noise they made. Chinese

shoes crippled his feet, and finally rags wrapped around his feet were the only protection he had. He was secreted by day, but not allowed to sleep soundly, because of a certain habit whose sound might attract attention. Yet his vitality was such, that after sleeping for a day or two and visiting the barber he shows few effects of the hardships. The three bandit chiefs concerned in the abduction have all been appointed majors in the Honan army, and are attached to the bodyguard of the commander of the First Mixed Brigade. It should be understood that these appointments are not as a reward for the kidnapping, but for the release of Mr. Kyle. As a local paper, edited by Chinese, puts it: "In China they always take the enlightened view that a man is only a bandit from force of circumstances. 'It isn't them as has money that breaks into houses and steals.' China must have some features in common with England in the days of Dr. Johnson who said that a pension was the reward of a traitor for betraying his country."

* * *

John Stevens, head of the American railway unit to Russia, together with his son and secretary, has been visiting Peking. It is presumed that his visit has had to do with the status of the American experts who at present are giving their attention to the Chinese Eastern Railway.

Since the beginning of the great war, the following loans have been made by Japan to China on securities connected with communications:

Ministry of Communications loan.....	\$3,000,000
SzePingChieh-Chengchiatun Railway	5,000,000
Bank of Communications loan.....	5,000,000
Kirin Changchun Railway.....	4,011,000
Second Communications loan.....	20,000,000
	<hr/>
	\$37,011,000

On April 30 a contract was ratified between the Telegraph Administration and three Japanese banks for a loan of \$20,000,000. It is issued at par and bears eight per cent interest. Security offered is the entire government telegraph system and the income therefrom—about \$5,000,000 annually at present. China binds herself to hereafter make the first approach to Japanese financiers when in need of funds for this branch, to employ Japanese advisers and experts when extensions are to be made, and to purchase Japanese materials.

* * *

The Peking Suiyuan line is erecting four superheated Mikado locomotives, built for it by the American Locomotive Company. These engines will be used over the heavy grades between Nankow and Kalgan, over the Nankow pass

and through the Great Wall. They were ordered early in 1916.

* * *

It is understood that negotiations are under way for an extension of 130 miles into Eastern Mongolia of the recently constructed Ssupingkai—Chengchiatun line. The Yokohama Specie Bank will probably be in charge of financial arrangements. The extension is estimated to cost about \$1,000,000.

* * *

Graduates of American universities are managing directors of four out of the fourteen government lines in operation in China. These four lines produce two thirds of the entire gross revenue earned by the government system.

* * *

Shortage of cars remains critical. The situation is aggravated by the considerable troop movements in connection with inter-provincial troubles. Interested shippers and capitalists are busy devising plans to augment the car supply, but except for the small agreement on the Taokow Chinghua line, no agreements have been reached. The Ministry of Communications has apparently changed its attitude toward present high prices, in view of the probable long continuation of the war, and rehabilitation period after.

* * *

Another illustration of the growing appreciation of *esprit de corps* on the part of Chinese railway management is offered in the first track meet held under the auspices of the Ministry of Communications on the 15th of May. The contending teams represented the two Administration schools, Railway and Telegraph respectively. The records made were not remarkable, but the spirit displayed made the event a pronounced success. The grounds were decorated with the flags of all the allied and neutral nations. A band played western music at intervals throughout the day. The contestants for the most part were dressed for their events in accoutrements of American make, or copies of such makes. Two rooting sections, led by "yell leaders" who contorted themselves in the most approved collegiate style cheered on their respective mates to victory. Probably most remarkable of all, in view of traditions, was the presence of at least two hundred women and girls, representing the families of the officials in the Ministry and relatives of the contestants. However, these were segregated to a definite section. Spectators remained for hours watching and applauding the events with evident zest. Instinctively, it seemed, the most applause went to the contenders displaying the best "form."

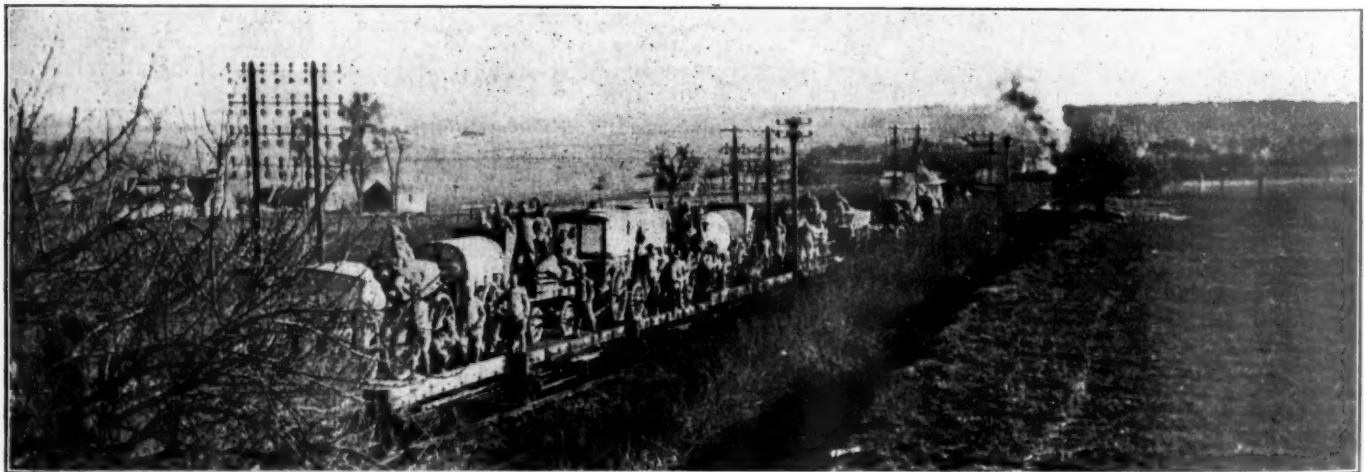


Photo Copyright by Press Illustrating Service

This Scene Does Not Look Much Like War

General News Department

J. M. Hawley, agricultural agent of the Buffalo, Rochester & Pittsburgh, estimates that there are 3,000 war gardens under cultivation by employees of that company. This is nearly double the number of gardens planted last year.

Six aeroplanes, built exclusively for mail carrying purposes have been completed at Elizabeth, N. J., and have been delivered to the government this week. Two are to be sent to Washington, two to Philadelphia and two to New York.

It is said that the city ticket offices in New York will be consolidated some time during August, with four offices only in New York City; one at 64 Broadway, one at 57 Chambers street, one at 31 West 57th street, and one at 114 West 42nd street. There will also be a consolidated ticket office in Brooklyn.

L. S. Carroll and **F. A. Bushnell**, members of the regional purchasing committee for Northwestern railroads, left Chicago on August 7 for an extended trip throughout the Northwestern region for the purpose of investigating the organization and practices of the stores departments of the roads under Federal control in that section of the country.

The **Quarterly Bulletin** of the voluntary relief department of the Pennsylvania Railroad western lines shows disbursements during the three months ending June 30, 1918, of \$18,750 in benefits for deaths resulting from accidents and \$79,414 in benefits for deaths resulting from natural causes, \$51,013 in benefits for disabilities resulting from accidents and \$108,343 in benefits for disability caused by sickness.

The collision of a freight train on the Belt Railway of Chicago with a street car at Sixty-third street and Archer avenue, Chicago, on August 5, resulted in 5 fatalities and 27 injuries. All of those injured and killed were passengers on the street car. The apparent cause of the accident was the attempt of the motorman of the street car to beat the train across the crossing. The street car was thrown 20 ft. down a grade and the locomotive jumped the tracks and tore up the adjoining rails.

At a meeting at **St. Paul, Minn.**, of representatives of railroad commissions of northwestern states, it was decided to request a conference with Mr. McAdoo at Washington, on or about August 20, through the National Association of Railroad and Utilities Commissioners, for the purpose of discussing a closer co-operation between the Railroad Administration and the state commissions. Representatives of the commissions in Minnesota, South Dakota and Iowa attended the meeting at St. Paul.

The city of **New Orleans** has recently authorized the appointment of a board of advisory engineers of the Public Belt Railroad Commission for the purpose of investigating the physical and financial feasibility of a bridge or tunnel crossing of the Mississippi river at or near the city in connection with terminal development under the auspices of the Public Belt Railroad. This board consists of four members, Lieut. Col. Bion J. Arnold, Chicago, chairman; Dr. J. A. L. Waddell, Kansas City; J. Vipond Davies, of New York, and A. F. Barclay, engineer of the Public Belt Railroad Company, secretary. The board is instructed to submit a report by the first of January, 1919. Field work will be conducted under the direction of J. R. Bibbins, Charles K. Allen and A. R. Archer.

Railroad Claim Swindler Arrested

The arrest of **E. Runderle**, an attorney in the Exchange building at the Union Stock Yards, Chicago, is expected to result in the disclosure of railroad claim swindles involving thousands of dollars and a number of railroad officers and employees in that city. Runderle was arrested on a federal warrant charg-

ing him with bribery. Several claim agents of railroads are said to have confessed receiving bribes from him in consideration of their aid in favoring his clients. It is alleged that Runderle, in many instances, negotiated directly with the heads of claim departments giving them bribes to pass generously upon the demands of his clients. Sometimes both shipper and railroads would be used for the purpose of effecting the collection of an exorbitant claim, from which Runderle would deduct not only the amount he had added to the claim of his client but also the fee for handling the case. Other attorneys are said to have engaged Runderle to handle their claims and these may be drawn into the case.

Telegraphers Still Threaten Strike

The Eastern general committee of the Commercial Telegraphers' Union of America has telegraphed Postmaster General Burleson, claiming that the Western Union is still discharging operators who join the union and also claiming that the officers of the Western Union are desirous of a telegraphers' strike while the union is doing its best to prevent such a strike. The telegram says in closing:

"In view of present unsatisfactory conditions, it is essential, in the opinion of the undersigned, that a statement be made by the Postmaster General with respect to the right of employees to organize without the loss of employment, and that his pronouncement on this principle includes decision on the cases of the men and women hitherto discharged by the company for membership in the union. These cases were referred to the Secretary of Labor in May and, we understand, were referred to the Postmaster General for final disposition."

Priority for Railroad Materials

The Priorities Division of the War Industries Board issued on July 26 circular No. 4, dated July 1. This embodies a revision of its rules and regulations governing priority in production, including changes suggested by the experience of the past six months, intended to simplify the administration of priorities and at the same time give greater assurance that the war requirements will be promptly met. The new circular continues in effect class AA, which comprises only emergency war work; class A, which comprises other war work, and class B, which comprises orders and work which, while not primarily designed for the prosecution of the war, yet are of public interest and essential to the national welfare or otherwise of exceptional importance. In order to secure rating within these three classes, application must still be made to the priorities committee, save in cases where provision is made for automatic classifications. One of the fundamental changes embodied in the circular is the establishment of automatic ratings. Automatic classifications are allowed on orders for materials, equipment or supplies for specific uses named in the circular, which places orders "for the repair or construction of steam railroad locomotives for use on the railroads under the jurisdiction of the United States Railroad Administration" in class A-4 and orders "for the manufacture of steam railroad materials, equipment and supplies other than locomotives for use on the railroads under the jurisdiction of the United States Railroad Administration" in class B-1. The automatic classifications do not prevent higher classifications being given on orders so included where it may appear essential or desirable that a higher classification be given. Application for transportation assistance where necessary should be made to T. C. Powell, manager of inland traffic, War Industries Board, Washington, D. C., on forms of application which may be had from him on request and a preference list compiled by the priorities board is used as a guide by the United States Fuel Administration and the United States Railroad Administration in the distribution of fuel to industries and plants.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY, 1918

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decrease) last year.		
		Freight.	Passenger.	Total (inc. misc.).	Maintenance of way and structures.	Equip. ment.	Traffic.					Trans- portation.	General.	Total.
FIVE MONTHS OF CALENDAR YEAR 1918													
Belt Ry. of Chicago.....	31	\$335,450	\$349,092	\$684,542	\$24,694	\$54,420	\$444	\$174,626	\$3,177	\$257,361	\$14,743	\$7,698	—\$28,386
Central Vermont.....	411	1,374,163	1,677,916	3,052,079	1,869,316	2,548,818	3,150	1,197,187	18,770	1,988,331	18,500	8,114	—36,963
Chicago Great Western.....	1,496	4,728,960	1,677,916	6,406,876	2,548,818	3,052,079	1,197	1,197,187	18,770	1,988,331	18,500	8,114	—36,963
Delaware & Hudson.....	878	2,157,076	230,698	2,387,774	1,390,703	315,388	3,409	250,164	36,495	1,232,353	58,350	103,082	—72,239
Detroit & Mackinac.....	381	117,782	18,727	136,509	243,193	267,336	26,579	1,232,120	8,671	2,200,609	66,440	16,489	104,380
Detroit, Toledo & Ironton.....	441	205,199	10,230	215,429	232,864	27,238	4,651	52,092	5,927	112,595	10,015	16,489	3,151
Kansas City Terminal.....	24	.....	.....	109,441	12,793	14,816	.....	39,314	528	67,712	8,500	—8,276	—14,986
MONTH OF JUNE, 1918													
Belt Ry. of Chicago.....	31	\$1,374,163	\$303,052	\$1,677,215	\$161,106	\$259,956	\$2,060	\$876,891	\$34,314	\$1,334,332	\$83,726	\$53,334	—\$266,275
Central Vermont.....	411	4,728,960	1,677,916	6,406,876	2,548,818	3,052,079	1,197	1,197,187	18,770	1,988,331	18,500	8,114	—36,963
Chicago Great Western.....	1,496	10,537,592	987,072	11,524,664	6,981,470	995,902	1,324	3,052,294	18,770	1,988,331	18,500	8,114	—36,963
Delaware & Hudson.....	878	2,157,076	230,698	2,387,774	1,390,703	315,388	3,409	250,164	36,495	1,232,353	58,350	103,082	—72,239
Detroit & Mackinac.....	381	433,016	116,642	549,658	90,499	124,294	11,458	262,917	27,696	516,625	44,105	13,882	—63,130
Detroit, Toledo & Ironton.....	441	688,742	45,498	734,240	177,249	312,381	16,901	591,650	46,463	1,144,654	42,500	381,690	—445,022
Kansas City Terminal.....	24	.....	.....	468,289	56,144	83,054	.....	208,980	60,394	355,892	95,632	16,764	—53,992
MONTH OF JUNE, 1918													
Alabama Great Southern.....	312	\$460,071	\$213,302	\$673,373	\$75,027	\$170,838	\$16,822	\$370,079	\$21,896	\$661,782	\$21,470	\$40,219	—\$157,149
Atchafalaya & Santa Fe.....	8,046	8,477,241	3,479,823	11,957,064	2,205,680	2,411,713	1,683	6,386,609	291,908	11,088,466	557,276	1,275,752	—2,175,108
Atlanta & West Point.....	93	73,199	108,853	182,052	27,047	41,183	1,327	27,971	1,451	170,209	15,700	43,367	—20,276
Atlanta, Birmingham & Atlantic.....	639	218,634	307,625	526,259	97,685	98,620	12,077	275,142	20,975	504,560	15,700	43,367	—20,276
Atlantic Coast Line.....	4,843	2,645,627	1,408,523	4,054,150	684,108	1,623,004	1,360	2,748,731	137,020	5,271,671	200,000	—108,137	—1,773,786
Baltimore & Ohio.....	4,948	10,860,878	2,812,441	13,673,319	2,389,333	4,202,392	267,789	9,331,535	447,459	16,757,642	350,566	—2,256,056	—4,728,929
Baltimore, Chesapeake & Atlantic.....	87	68,114	41,698	109,812	14,775	36,500	1,674	92,227	5,113	150,290	3,501	39,176	58,977
Pangor & Aroostook.....	632	281,984	59,559	341,543	97,153	126,006	5,354	230,435	17,208	480,839	17,735	—137,183	—216,607
Peaumont, Sour Lake & Western.....	118	73,000	28,000	101,000	104,894	22,340	2,106	53,365	6,888	111,779	2,150	—9,034	—21,804
Belt Ry. Co. of Chicago.....	31	.....	.....	352,949	34,594	55,813	292	308,954	10,526	410,181	16,442	—73,673	—175,321
Bessemer & Lake Erie.....	208	1,271,858	29,822	1,301,680	109,582	268,969	11,550	519,484	12,376	889,264	29,266	403,232	—29,470
Boston & Maine.....	2,305	3,459,431	1,649,594	5,109,025	1,053,007	1,395,981	57,381	4,119,942	208,786	7,986,190	178,420	—293,441	—2,177,843
Buffalo, Rochester & Pittsburgh.....	584	1,931,846	111,809	2,043,655	329,176	529,176	22,598	1,080,660	42,072	1,979,955	26,734	—356,571	—677,843
Carolina, Cincinnati & Ohio.....	282	293,726	40,776	334,502	94,511	118,877	9,356	167,566	17,671	387,701	14,800	—61,992	—206,905
Central of Georgia.....	1,918	860,217	1,521,629	2,381,846	331,413	406,943	42,536	959,372	17,926	1,809,129	63,205	—352,926	—632,970
Central of New Jersey.....	684	2,743,968	680,861	3,424,829	326,802	981,009	44,999	2,480,911	104,417	4,012,530	172,974	—439,237	—1,435,990
Central Vermont.....	411	338,931	70,335	409,266	94,167	119,218	12,635	333,132	19,031	599,100	18,500	—154,171	—311,526
Charleston & Western Carolina.....	342	146,607	54,695	201,302	38,868	37,034	4,120	162,811	4,080	246,914	9,000	—43,701	—103,599
Chicago & Alton.....	1,050	1,214,334	554,547	1,768,881	317,703	504,645	41,546	1,152,563	59,923	2,089,542	59,333	—220,139	—774,289
Chicago & Erie.....	269	642,624	121,405	764,029	129,770	263,089	17,582	586,844	35,283	1,033,322	36,608	—227,719	—445,652
Chicago & Northeastern.....	8,094	6,488,881	2,673,328	9,162,209	2,004,685	2,116,112	103,219	6,913,272	313,929	11,533,808	420,000	—1,956,811	—4,098,152
Chicago, Burlington & Quincy.....	9,373	7,229,926	2,580,694	9,810,620	2,325,966	2,879,576	123,726	6,095,609	397,128	11,933,787	489,650	—1,635,965	—5,210,901
Chicago Great Western.....	1,496	890,926	421,230	1,312,156	357,022	455,495	44,882	935,346	63,875	1,876,138	54,975	—502,323	—964,468
Chicago, Indianapolis & Louisville.....	637	643,776	234,239	878,015	125,569	193,236	21,019	512,308	31,470	882,229	31,918	51,297	—184,238
Chicago, Milwaukee & St. Paul.....	10,305	7,349,914	2,165,842	9,515,756	1,913,529	3,381,689	130,362	7,256,976	374,064	13,171,888	516,348	—3,070,894	—5,389,716
Chicago, Peoria & St. Louis.....	247	134,098	20,613	154,711	36,057	64,053	5,315	141,999	10,174	257,799	9,653	—103,495	—135,586
Chicago, Rock Island & Pacific.....	7,823	4,423,750	2,362,761	6,786,511	1,948,812	2,116,112	113,317	4,257,919	290,247	8,688,779	356,450	—1,756,516	—2,982,623
Chicago, Rock Island & Gulf.....	474	227,070	101,702	328,772	77,577	58,764	10,673	194,147	15,496	359,001	13,154	—22,933	—103,047
Chicago, St. Paul, Minn. & Omaha.....	1,749	1,144,558	593,834	1,738,392	332,884	521,315	31,164	1,269,081	79,506	2,251,992	105,202	—485,042	—877,575
Cincinnati.....	321	151,267	54,775	206,042	79,996	79,996	8,399	193,393	17,893	361,883	10,679	—147,468	—192,525
Cincinnati, New Orleans & Texas Pacific.....	337	806,749	343,089	1,149,838	149,526	407,204	30,976	633,065	35,006	1,252,375	38,485	—62,356	—178,497
Cincinnati Northern.....	245	198,812	15,899	214,711	48,537	62,594	4,974	119,272	7,421	242,560	44,764	—62,837	—176,752
Cleveland, Cinn., Chic. & St. Louis.....	2,397	2,838,927	1,515,186	4,354,113	812,649	1,093,474	100,533	3,388,519	148,798	5,502,614	1,529,113	—1,276,875	—2,589,048
Coal & Coke.....	197	91,412	22,245	113,657	30,170	37,884	1,800	58,604	5,000	133,458	5,006	—13,875	—34,503
Colorado & Southern.....	1,100	732,487	157,376	889,863	168,745	259,791	12,808	554,461	51,913	1,074,595	47,000	—96,352	—367,291
Cumberland Valley.....	163	343,315	66,898	410,213	88,927	76,306	10,484	264,070	20,911	431,056	9,486	3,419	—192,944
Denver & Rio Grande.....	2,610	1,686,823	436,615	2,123,438	435,542	616,998	33,411	1,240,735	94,942	2,463,396	105,000	—305,591	—941,876
Duluth & Iron Range.....	284	1,063,497	19,851	1,083,348	142,894	102,988	153	290,831	9,162	547,803	60,805	592,900	49,114
Duluth, Missabe & Northern.....	410	2,370,845	43,283	2,414,128	228,760	137,665	2,589	488,748	31,683	890,851	156,585	1,463,585	143,436
East St. Louis Connecting.....	3	.....	.....	86,727	17,272	15,097	334	116,365	6,496	155,564	2,627	—20,811	—97,914
El Paso & Southwestern Co.....	1,028	933,110	209,621	1,142,731	173,069	242,069	13,207	882,236	45,138	1,013,145	50,985	136,594	—346,818
Elgin, Joliet & Eastern.....	806	1,335,318	1,561,739	2,897,057	1,334,342	1,551,551	1,364	1,854,566	16,125	3,188,902	50,773	99,271	—374,165
Erie.....	1,987	5,360,831	1,067,677	6,428,508	1,244,878	3,427,383	10,170	5,069,846	270,020	10,161,834	236,897	—175,032	—4,586,673
Florida East Coast.....	764	373,946	148,007	521,953	111,704	128,540	7,777	431,517	26,269	607,962	40,906	—140,089	—398,855
Ft. Smith & Western R. R. Co.....	253	56,549	21,984	78,533	15,858	30,138	3,313	44,319	6,160	100,379	4,500	—18,040	—7,460
Ft. Worth & Denver City.....	454	328,437	161,321	489,758	103,297	162,923	6,936	335,922	38,403	650,298	121,440	—150,658	—313,005
Galveston, Harrisburgh & San Antonio.....	1,360	942,138	471,956	1,414,094	225,669	287,871	28,871	808,913	74,079	1,343,802	56,767	110,386	—401,382
Galveston Wharf.....	13	.....	.....	73,947	512	692	485	27,394	462	50,667	12,300	10,981	371
Georgia.....	328	249,134	227,192	476,326	51,580	72,811	10,077	292,568	19,241	446,171	5,950	52,690	—4,733

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE, 1918.—Continued.

Name of road.	Average mileage operated during period.	Operating revenues				Operating expenses			Operating ratio.	Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decrease) comp. with last year.
		Freight.	Passenger.	Total (inc. misc.)	Maintenance of way and structures.	Traffic.	Trans- portation.	General.					
Great Northern	8,261	\$5,496,721	\$1,619,998	\$7,116,719	\$1,834,609	8,261	\$1,834,609	\$1,834,609	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Gulf, Colorado & Santa Fe	1,937	883,303	441,192	1,324,495	1,418,267	1,937	1,418,267	1,418,267	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Gulf, Mobile & Northern	402	142,016	29,303	171,319	171,319	402	171,319	171,319	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Hocking Valley	349	930,014	96,595	1,026,609	1,026,609	349	1,026,609	1,026,609	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Houston, East & West Texas	190	92,756	38,767	131,523	131,523	190	131,523	131,523	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Houston & Texas Central	948	390,229	214,582	604,811	604,811	948	604,811	604,811	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Illinois Central	4,782	6,218,176	1,854,609	8,072,785	8,072,785	4,782	8,072,785	8,072,785	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Kanawha & Michigan	176	421,951	110,368	532,319	532,319	176	532,319	532,319	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Kansas City, Mexico & Orient	272	56,505	15,748	72,253	72,253	272	72,253	72,253	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Kansas City Southern	774	892,878	185,814	1,078,692	1,078,692	774	1,078,692	1,078,692	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Lake Erie & Western	900	636,802	729,002	1,365,804	1,365,804	900	1,365,804	1,365,804	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Lehigh & Hudson River	96	189,858	3,650	193,508	193,508	96	193,508	193,508	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Lehigh & New England	296	434,583	4,271	438,854	438,854	296	438,854	438,854	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Long Island	398	438,276	1,648,237	2,086,513	2,086,513	398	2,086,513	2,086,513	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Louisiana Western	207	191,947	107,668	299,615	299,615	207	299,615	299,615	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Louisville, Henderson & St. Louis	199	168,000	59,000	227,000	227,000	199	227,000	227,000	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Maryland Delaware & Virginia	82	45,888	30,459	76,347	76,347	82	76,347	76,347	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Michigan Central	1,861	3,318,632	1,471,286	4,789,918	4,789,918	1,861	4,789,918	4,789,918	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Minneapolis & St. Louis	1,646	685,829	177,993	863,822	863,822	1,646	863,822	863,822	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Min. & International Ry. Co.	195	63,689	25,866	89,555	89,555	195	89,555	89,555	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Missouri, St. Paul & Gulf	4,243	1,639,591	599,282	2,238,873	2,238,873	4,243	2,238,873	2,238,873	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Missouri, St. Paul & Northern Pacific	332	91,516	29,464	120,980	120,980	332	120,980	120,980	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Missouri Pacific	7,301	4,067,473	1,739,602	5,807,075	5,807,075	7,301	5,807,075	5,807,075	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Mobile & Ohio	1,159	929,248	167,179	1,096,427	1,096,427	1,159	1,096,427	1,096,427	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Monongahela	108	255,354	15,975	271,329	271,329	108	271,329	271,329	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Nashville, Chattanooga & St. Louis	1,237	1,091,848	494,913	1,586,761	1,586,761	1,237	1,586,761	1,586,761	100.00	\$0.00	\$0.00	\$0.00	\$0.00
New Orleans & North Eastern	203	296,674	129,394	426,068	426,068	203	426,068	426,068	100.00	\$0.00	\$0.00	\$0.00	\$0.00
New York Great Northern	284	130,602	37,613	168,215	168,215	284	168,215	168,215	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Missouri Central	164	57,846	44,601	102,447	102,447	164	102,447	102,447	100.00	\$0.00	\$0.00	\$0.00	\$0.00
New York, Chicago & St. Louis	191	108,000	36,000	144,000	144,000	191	144,000	144,000	100.00	\$0.00	\$0.00	\$0.00	\$0.00
New York, Ontario & Western	572	1,541,062	231,372	1,772,434	1,772,434	572	1,772,434	1,772,434	100.00	\$0.00	\$0.00	\$0.00	\$0.00
New York, Susquehanna & Western	567	668,937	225,039	893,976	893,976	567	893,976	893,976	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Norfolk Southern	135	216,233	52,866	269,099	269,099	135	269,099	269,099	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Norfolk Southern	907	336,553	134,174	470,727	470,727	907	470,727	470,727	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Northern Pacific	6,596	5,554,538	1,553,661	7,108,199	7,108,199	6,596	7,108,199	7,108,199	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Northwestern Pacific	507	240,982	238,144	479,126	479,126	507	479,126	479,126	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Oregon Short Line	318	1,925,239	621,703	2,546,942	2,546,942	318	2,546,942	2,546,942	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Panhandle & Santa Fe	709	309,959	118,881	428,840	428,840	709	428,840	428,840	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Peoria & Pekin Union	19	17,566	6,409	24,000	24,000	19	24,000	24,000	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Pere Marquette	2,240	1,778,622	368,916	2,147,538	2,147,538	2,240	2,147,538	2,147,538	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Pittsburgh & Lake Erie	224	2,302,815	183,508	2,486,323	2,486,323	224	2,486,323	2,486,323	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Pittsburgh & Shawmut	94	118,679	3,867	122,546	122,546	94	122,546	122,546	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Pittsburgh & West Virginia	63	142,561	9,087	151,648	151,648	63	151,648	151,648	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Rutland	415	216,342	97,252	313,594	313,594	415	313,594	313,594	100.00	\$0.00	\$0.00	\$0.00	\$0.00
St. Joseph & Grand Island	258	154,051	30,944	184,995	184,995	258	184,995	184,995	100.00	\$0.00	\$0.00	\$0.00	\$0.00
St. Louis, Brownsville & Mexico	548	175,000	88,000	263,000	263,000	548	263,000	263,000	100.00	\$0.00	\$0.00	\$0.00	\$0.00
St. Louis, Merchant's Bridge Terminal	9	3,430,227	1,771,229	5,201,456	5,201,456	9	5,201,456	5,201,456	100.00	\$0.00	\$0.00	\$0.00	\$0.00
St. Louis-San Francisco	4,761	593,489	191,699	785,188	785,188	4,761	785,188	785,188	100.00	\$0.00	\$0.00	\$0.00	\$0.00
St. Louis Southwestern	968	274,454	150,144	424,598	424,598	968	424,598	424,598	100.00	\$0.00	\$0.00	\$0.00	\$0.00
St. Louis Southwestern of Texas	814	274,454	150,144	424,598	424,598	814	424,598	424,598	100.00	\$0.00	\$0.00	\$0.00	\$0.00
San Antonio & Aransas Pass	732	145,029	96,162	241,191	241,191	732	241,191	241,191	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Seaboard	3,561	1,517,617	1,263,144	2,780,761	2,780,761	3,561	2,780,761	2,780,761	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Southern	6,983	4,682,142	3,969,028	8,651,170	8,651,170	6,983	8,651,170	8,651,170	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Southern in Mississippi	278	50,182	30,444	80,626	80,626	278	80,626	80,626	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Spokane, Portland & Seattle	165	56,622	15,121	71,743	71,743	165	71,743	71,743	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Spokane, Portland & Seattle	554	465,144	203,559	668,703	668,703	554	668,703	668,703	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Staten Island Rapid Transit Co.	23	84,507	83,554	168,061	168,061	23	168,061	168,061	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Terminal R. R. Assn. of St. Louis	36	3,488	3,488	6,976	6,976	36	6,976	6,976	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Texas & New Orleans	81	62,441	19,595	82,036	82,036	81	82,036	82,036	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Texas & New Orleans	469	374,562	157,871	532,433	532,433	469	532,433	532,433	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Toledo & Ohio Central	435	695,136	66,156	761,292	761,292	435	761,292	761,292	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Toledo, Peoria & Western	247	73,128	36,864	110,000	110,000	247	110,000	110,000	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Toledo, St. Louis & Western	454	506,334	92,210	598,544	598,544	454	598,544	598,544	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Trinity & Brazos Valley	368	50,796	14,272	65,068	65,068	368	65,068	65,068	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Union Pacific	128	58,452	17,039	75,491	75,491	128	75,491	75,491	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Union Pacific	3,630	4,987,615	1,788,321	6,775,936	6,775,936	3,630	6,775,936	6,775,936	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Union R. R. of Pennsylvania	35	781,706	56,035	837,741	837,741	35	837,741	837,741	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Virginian	518	2,667,076	961,431	3,628,507	3,628,507	518	3,628,507	3,628,507	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Washington	2,519	1,043,982	92,226	1,136,208	1,136,208	2,519	1,136,208	1,136,208	100.00	\$0.00	\$0.00	\$0.00	\$0.00
Western Maryland	707	1,043,982	92,226	1,136,208	1,136,208	707	1,136,208	1,136,208	100.00	\$0.00	\$0.00	\$0.00	\$0.00

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE, 1918.—Continued.

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			General.	Total.	Operating ratio.	Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decrease) comp. with last year.
		Freight.	Passenger.	Total (inc. misc.)	Maintenance of way and structures.	Equip-ment.	Traffic.								Trans-shipment.
Western Pacific	1,022	\$686,678	\$194,545	\$881,223	\$198,798	\$137,843	\$19,658	\$361,316	\$32,367	\$764,408	\$2,408	\$2,408	\$2,408	\$2,408
Western Ry. of Alabama.....	133	73,956	115,694	189,650	29,513	47,235	6,109	101,918	11,066	198,543	96,29	96,29	96,29	96,29
Wheeling & Lake Erie.....	511	1,032,681	44,994	1,077,675	164,304	205,824	10,604	708,157	38,457	1,230,234	54,660	54,660	54,660	54,660
Yazoo & Mississippi Valley.....	382	1,224,043	306,466	1,602,525	393,505	592,719	16,152	1,056,778	65,380	2,127,588	61,528	61,528	61,528	61,528
SIX MONTHS OF CALENDAR YEAR, 1918														
Alabama Great Southern.....	312	\$2,603,879	\$1,044,362	\$3,648,241	\$319,691	\$891,576	\$80,332	\$1,515,601	\$88,725	\$2,915,823	\$126,371	\$126,371	\$126,371	\$126,371
Atchafalaya, Topeka & Santa Fe.....	8,046	49,466,544	17,210,179	66,676,723	9,601,727	1,302,856	956,450	26,130,942	1,424,425	51,008,228	21,413,433	21,413,433	21,413,433	21,413,433
Atlanta & West Point.....	93	512,579	462,353	974,932	126,756	180,681	26,441	387,465	38,381	770,435	50,300	50,300	50,300	50,300
Atlantic Coast Line.....	639	1,511,338	342,561	1,853,899	2,004,769	452,732	474,613	1,091,813	82,218	2,165,766	160,997	160,997	160,997	160,997
Baltimore & Ohio.....	4,943	50,430,933	12,651,419	63,082,352	7,666,062	2,002,961	334,436	11,186,784	590,806	20,191,010	6,035,224	6,035,224	6,035,224	6,035,224
Baltimore, Chesapeake & Atlantic.....	4,943	50,430,933	12,651,419	63,082,352	7,666,062	2,002,961	334,436	11,186,784	590,806	20,191,010	6,035,224	6,035,224	6,035,224	6,035,224
Bangor & Aroostook.....	632	1,750,454	369,928	2,120,382	393,904	479,909	24,282	960,367	76,494	1,959,274	106,410	106,410	106,410	106,410
Beaumont, Sour Lake & Western.....	118	531,445	187,100	718,545	92,143	90,496	12,472	247,657	27,572	470,341	273,738	273,738	273,738	273,738
Belt Ry. Co. of Chicago.....	31	.....	.....	.....	1,824,342	195,699	315,769	1,185,881	44,840	1,744,512	79,820	79,820	79,820	79,820
Bessemer & Lake Erie.....	208	4,682,217	175,631	4,857,848	580,330	1,469,610	71,693	2,037,031	118,523	4,112,382	875,535	875,535	875,535	875,535
Boston & Maine.....	2,305	18,682,942	8,228,777	26,911,719	4,105,630	5,971,490	220,811	12,231,812	873,075	29,598,488	652,169	652,169	652,169	652,169
Buffalo & Susquehanna R. R. Corp.....	584	7,118,549	616,329	7,734,878	1,107,938	2,588,726	100,288	3,948,034	206,471	7,963,488	69,085	69,085	69,085	69,085
Carolina, Clinchfield & Ohio.....	262	1,817,625	204,428	2,022,053	261,394	459,562	70,573	698,838	83,781	1,572,719	483,961	483,961	483,961	483,961
Central of Georgia.....	1,918	6,015,269	2,553,511	8,568,780	1,401,975	1,697,822	206,748	3,770,293	302,240	7,381,460	2,169,639	2,169,639	2,169,639	2,169,639
Central of New Jersey.....	684	14,003,169	3,900,696	17,903,865	1,663,762	4,475,775	165,509	9,863,145	469,652	16,750,839	1,111,235	1,111,235	1,111,235	1,111,235
Central Vermont.....	411	1,711,095	373,386	2,084,481	338,986	496,302	51,786	1,550,718	73,802	2,027,432	107,700	107,700	107,700	107,700
Charleston & Western Carolina.....	342	977,658	272,430	1,250,088	802,113	181,196	23,497	637,870	26,128	1,062,739	54,884	54,884	54,884	54,884
Chicago & Alton.....	1,050	6,800,554	2,483,035	9,283,589	1,459,751	2,539,262	67,112	4,781,374	237,673	9,273,459	845,291	845,291	845,291	845,291
Chicago & Erie.....	269	3,761,140	359,855	4,120,995	960,773	930,916	95,219	2,654,462	131,333	4,783,422	245,107	245,107	245,107	245,107
Chicago & Northwestern.....	8,094	34,396,484	12,176,421	46,572,905	5,189,520	10,904,108	564,321	27,008,891	1,277,190	48,640,742	3,219,778	3,219,778	3,219,778	3,219,778
Chicago, Burlington & Quincy.....	9,373	43,998,986	12,667,774	56,666,760	9,253,068	12,746,062	683,660	26,463,390	1,277,190	56,666,760	10,960,814	10,960,814	10,960,814	10,960,814
Chicago, Great Western.....	1,496	5,619,886	2,099,146	7,719,032	1,327,901	5,602,172	478,286	13,314,635	611,705	23,424,630	5,876,937	5,876,937	5,876,937	5,876,937
Chicago, Indianapolis & Louisville.....	657	3,104,158	1,045,678	4,150,836	552,398	1,111,973	170,013	2,911,461	146,031	4,031,215	541,993	541,993	541,993	541,993
Chicago, Milwaukee & St. Paul.....	10,305	39,274,067	9,966,580	49,240,647	7,382,871	15,099,993	299,038	29,114,601	1,413,747	53,814,637	1,257,493	1,257,493	1,257,493	1,257,493
Chicago, Peoria & St. Louis.....	247	858,959	119,825	978,784	157,169	317,059	28,335	618,958	43,113	1,164,633	126,603	126,603	126,603	126,603
Chicago, Rock Island & Gulf.....	474	1,461,436	524,532	1,985,968	309,441	51,805	814,979	63,027	1,527,963	173,852	596,992	596,992	596,992	596,992
Chicago, Rock Island & Pacific.....	7,823	28,527,399	12,511,355	41,038,754	6,717,085	9,835,714	681,075	20,298,711	1,216,205	38,509,962	87,856	87,856	87,856	87,856
Chicago, St. Paul, Minn. & Omaha.....	1,749	7,110,033	2,761,804	9,871,837	1,225,949	3,652,687	144,861	5,849,030	315,635	9,670,114	982,745	982,745	982,745	982,745
Cincinnati, Indianapolis & Western.....	321	1,060,868	256,786	1,317,654	207,893	362,104	42,601	244,121	65,465	1,424,071	26,554	26,554	26,554	26,554
Cincinnati, New Orleans & Texas Pacific.....	337	4,352,176	1,740,805	6,092,981	372,976	1,802,859	141,812	2,758,135	145,177	5,454,565	1,149,554	1,149,554	1,149,554	1,149,554
Cincinnati Northern.....	245	1,042,013	79,532	1,121,545	208,457	311,986	21,189	503,974	27,911	1,072,530	93,747	93,747	93,747	93,747
Cleveland, Cnn., Chic. & St. Louis.....	2,397	20,021,017	6,364,366	26,385,383	3,327,901	5,602,172	478,286	13,314,635	611,705	23,424,630	5,876,937	5,876,937	5,876,937	5,876,937
Coal & Coke.....	197	490,894	123,438	614,332	132,723	205,514	8,806	315,591	22,900	685,536	42,963	42,963	42,963	42,963
Colorado & Southern.....	1,100	4,410,176	944,576	5,354,752	649,732	1,222,143	57,675	2,195,447	210,367	4,365,287	1,367,850	1,367,850	1,367,850	1,367,850
Cumberland Valley.....	163	1,734,519	345,364	2,079,883	339,942	306,614	33,082	526,567	75,064	1,584,226	67,579	67,579	67,579	67,579
Denver & Rio Grande.....	2,610	10,530,520	2,193,501	12,724,021	1,636,732	3,249,919	175,958	5,171,204	365,081	10,784,486	7,234,759	7,234,759	7,234,759	7,234,759
Duluth & Iron Range.....	284	2,613,634	112,279	2,725,913	620,693	474,914	5,497	960,890	82,283	2,148,522	658,332	658,332	658,332	658,332
Duluth, Missabe & Northern.....	410	5,134,439	205,404	5,339,843	897,280	799,769	18,296	1,432,045	245,153	3,406,496	2,185,347	2,185,347	2,185,347	2,185,347
East St. Louis Connecting.....	3	.....	.....	.....	66,165	77,155	1,876	430,764	25,852	601,812	111,201	111,201	111,201	111,201
El Paso & Southwestern Co.....	1,028	5,743,508	1,239,060	6,982,568	689,646	1,069,587	99,458	2,214,685	202,907	4,348,213	2,963,717	2,963,717	2,963,717	2,963,717
Elgin, Joliet & Eastern.....	806	6,901,380	61	6,901,441	995,530	1,904,899	42,371	3,489,313	154,394	6,584,855	2,963,680	2,963,680	2,963,680	2,963,680
Erie.....	1,987	27,296,525	4,985,322	32,281,847	5,049,862	12,533,707	517,498	20,184,658	1,021,884	40,184,076	4,695,993	4,695,993	4,695,993	4,695,993
Florida East Coast.....	764	2,871,294	1,500,142	4,371,436	501,102	584,910	74,731	1,846,683	114,711	3,063,124	1,967,414	1,967,414	1,967,414	1,967,414
Ft. Smith & Western R. Co.....	253	410,999	134,831	545,830	101,567	164,505	16,974	233,299	33,971	554,125	44,001	44,001	44,001	44,001
Ft. Worth & Denver City.....	454	2,431,928	889,991	3,321,919	542,162	1,810,010	35,804	1,541,544	134,682	2,850,180	661,771	661,771	661,771	661,771
Galveston, Harrisburgh & San Antonio.....	1,360	6,939,704	2,381,133	9,320,837	1,215,539	1,354,013	177,380	3,963,580	299,369	7,920,915	1,711,756	1,711,756	1,711,756	1,711,756
Galveston Wharf.....	33	.....	.....	.....	5,325	5,325	2,338	121,391	3,764	321,065	198,301	198,301	198,301	198,301
Georgia.....	13	1,716,291	823,786	2,540,077										

Interchange Defect Carding

The Master Car Builders' Association has issued circular No. 12 in reference to defect carding of cars in interchange. The rules have been changed as follows:

(a) Defect carding for any delivering line defects as between government controlled roads for defects on cars belonging to non-government controlled roads and private car lines, as well as cars belonging to government controlled roads, is discontinued.

(b) Defect carding for any delivering line defects on cars belonging to non-government controlled roads and private car lines is limited to the first and last government controlled road receiving or delivering the car.

Cannot Garnishee Railway Wages

In a decision delivered on August 1, by Judge Hugh J. Kearns of the Chicago municipal court, it was held that railroad employees are in the same category as employees of the nation, state, county and city and that their wages cannot be garnisheed. The decision was made in the case of John Shea for the use of Harry Poulos vs. the Chicago, Rock Island & Pacific. The road pled that its revenues belong to the United States Government and are not subject to garnishment and its contention was upheld by the judge. He explained that the government had announced that while it was opposed to garnishment suits against railroads, it intended to investigate all claims against railroad employees. In case the claims were just and no satisfactory explanation was given as to why they had not been met, employees would be discharged.

Recruiting Labor for Railroads

The railroads will not lose out in the campaign now going on to recruit unskilled labor for employers engaged in war work.

The Department of Labor in a statement issued last week said:

While the prohibition against recruiting of unskilled labor by employers engaged in war work, except under the direction of the Department of Labor does not include railroads and farmers, the transportation and agricultural industries will be assisted by the United States Employment Service in every way possible.

Specialization in farm and railroad labor supplying is a feature of the central labor recruiting program and the leading branch offices have special railroad labor and farm labor divisions, while in the West and in some places in the South and East offices have been established which devote their entire attention to supplying farm labor and railroad unskilled labor. Recently the employment offices of railroads in Western territory were made a part of the Federal Employment Service system.

This statement is made necessary by the existence of an erroneous belief that railroads and farms must obtain labor through means other than the United States Employment Service. The service will not only assist railroads and farms in getting unskilled labor, but they will be protected by the Department of Labor from recruiting by other industries.

Store-Door Delivery Problems

Some of the agents of California shipper food products to New York have been protesting to the Railroad Administration against the plan for store-door delivery of freight without some modifications.

One shipper is quoted in part as follows:

"But as it is proposed to operate the scheme we are to have no notice of arrival till a railroad truckman backs up to our office door with several hundred boxes or cases on his truck. Where we can put them I do not know. Surely not in this office; and I defy anyone to find warehouses available in this city for short-order delivery. Nor can we tell anything about approximate arrival date the way things are being delayed now. The wasted time of trucks awaiting a chance to unload will be as bad if not worse than the present delay of goods on docks, and will cost more money."

"The ideal system would be for the railroad to provide ware-

houses—make every dock a five or six-story storage house if necessary—and then store for our account after the expiration of a reasonable time of notice. As it is, every warehouse in town is full, and space cannot be had even with plenty of time to hunt for it. If we had to keep warehouse space available, the wasted rent when it was empty, especially when multiplied by the hundreds and thousands of concerns like ourselves, with no use for warehouses more than a few weeks in the year—for we do not carry stocks on hand—would add materially to the cost of doing business. In our case haulage to the warehouse, haulage out again for delivery, double handling and warehouse charges would be as much as \$200 a car, and I think that is more of a burden than the Administration ought to saddle us with, knowing full well that it would have to be passed along to the trade and the consumer."

Railway Business Association

J. M. Hansen, president of the Standard Steel Car Company, Pittsburgh, and E. J. Kearney, secretary and treasurer of Kearney & Trecker, Milwaukee, manufacturers of machine tools, have been appointed members of the general executive committee of the Railway Business Association. Mr. Hansen has been assigned to the committee on government purchasing policies, and Mr. Kearney to the committee on railways after the war. Mr. Kearney's appointment was in accordance with the plan to offer immediate representation to the group of companies enrolling with the association since the annual meeting at Chicago in March.

Frank W. Noxon, secretary of the association, has sent the following letter and list of questions to all members:

"Tardiness by individual railroads in paying bills for goods delivered having again shown an increase as indicated by letters from our members, the matter has been discussed by us with the authorities in Washington.

"Individual complaints to the Division of Finance and Purchases are now investigated where the manufacturer specifies the road, gives the facts and seems to set up a prima facie case of flagrancy. It has been suggested that the Railroad Administration prescribe a standard of promptness, establish means of payment for all roads, and provide a check-up of performance. The decision of the authorities as to whether the situation requires such action will be based upon the facts as presented. Such facts our association can only obtain from the members. We shall present the matter to the Director of Finance and Purchases as soon as we have in hand sufficient material to show that the condition is general.

"For this purpose we have arbitrarily fixed 60 days as the line beyond which remittances will be regarded as tardy. To be considered, facts must be concrete and susceptible of verification. Are you in position to name roads? If not, can you get into that position by discussing the matter with railroad disbursing officers and gaining their acquiescence to your stating the facts? If neither, can you suggest an alternative method of our making a case?

"Appended hereto is a questionnaire.

"1. Please furnish the Railway Business Association to be quoted to the director of finance and purchases a statement naming roads and giving figures and dates of all accounts outstanding before, or incurred since, governmental control where the lapse of time between delivery and remittance has exceeded 60 days.

"2. If not in a position to comply with (1) please endeavor to obtain from appropriate officers of individual roads whose remittances you deem slow acquiescence in your stating to the director of finance and purchases the facts together with the reason given by the road for tardiness and furnish the Railway Business Association statement covering for such roads as acquiesce the information called for under (1).

"3. If you feel reluctant to follow either of the methods suggested above in (1) and (2) can you suggest any other method by which the facts of the situation may be presented to the authorities?

"4. Please give a list of reasons stated by railway disbursing officers for delay in remittances.

"5. Please state recommendations which our association might appropriately make to the director of finance and purchases intended to be helpful to him in framing instructions as to future practice in auditing, provision of funds and remittances."

Traffic News

The Railroad Administration has established a western lines bureau of service of national parks and monuments with Howard Hayes formerly manager of the department of tours of the Chicago & North Western and the Union Pacific lines in charge, with headquarters at Chicago. One representative of each road serving parks will assist Mr. Hayes. The government will distribute circulars and information on parks and monuments and answer inquiries about rates and service to them without charge to the public.

Important developments with regard to the construction, operation and management of the intra-coastal waterways systems from Boston to Beaufort may result from the hearings held recently before the Army Board of Engineers for Rivers and Harbors in Washington. Major-General William M. Black, chief of engineers, in a report recently made public, recommended that such a system be placed by the Railroad Administration in charge of a director, who shall control them as the railroads are now being managed.

Indictments for Rebating

The Pennsylvania Railroad, Armour & Co., Swift & Co. and the Jersey City Stock Yards Company were indicted by the Federal Grand Jury yesterday on the charge of conspiring to violate the Interstate Commerce law prohibiting rebates. The indictments were returned to Judge Julius M. Mayer in the United States District Court.

The indictments charged that Armour & Co. caused to be incorporated the Jersey City Stock Yards Company, all the stock of which was to be owned by the Armour and Swift packing concerns. Then the Pennsylvania Railroad, the indictments state, leased the Harsimus stock yards property in Jersey City to the Jersey City Stock Yards Company at an inadequate rental, and as the results the packing plants thereafter made their cattle shipments over that railroad.

The indictments charged that the packing concerns shipped livestock destined for New York consumption over other railroads prior to the leasing of the Harsimus yards, but afterward the shipments were routed over the Pennsylvania Railroad. This practice extended from November 6, 1912, to December 27, 1917, the indictments charged.

Grain Movement Under Way

The movement of grain is starting this year much earlier than last year. In the ten days from July 15 to July 25 the railroads under federal control handled 40,044 cars in the three western and in the eastern regions, as compared with 24,533 for the same ten days of last year, an increase of 15,511 cars.

The figures compiled by the Railroad Administration are as follows:

	1918	1917
Southwestern	11,414	7,782
Central Western	19,301	8,978
Northwestern	6,347	6,772
Eastern	2,982	1,001
	40,044	24,533

The Northwestern is the only region of the four which shows a smaller movement this year than last. This is because the movement from this region has not yet started in volume and also because last year the railroads were still moving some of the old crop.

Coal Production

The output of bituminous coal during the week of July 27 declined approximately 1 per cent from the preceding week, according to the report of the Geological Survey. The production during the week, including lignite coal and coal made into coke, is estimated at 12,802,000 net tons, a decrease compared with the week preceding of 121,000 net tons, but an increase

over the corresponding week of 1917 of 1,471,000 net tons, or 13 per cent. The average daily production is estimated at 2,134,000 net tons as against 2,154,000 net tons during the week of July 20 and as compared with 1,889,000 net tons during the week of July 27, 1917.

Anthracite shipments increased slightly during the week, the total movement amounting to 40,942 carloads.

The percentage of full time output lost on account of car shortage during the week of July 20 was 5.1 per cent.

Canadian Freight Rate Advances

In authorizing increases in freight rates in Canada in accordance with the orders in council by the Canadian government, Sir Henry Drayton, chairman of the Canadian railway board, gave out a statement in part as follows:

"The estimates of the increased costs filed by the Canadian Railway War Board, show a total increased cost of \$50,616,226, in addition to which there are further claims to be settled by the McAdoo award, which, if settled adversely to the companies, might call for an additional sum of \$19,930,000, making a possible outlay of \$70,546,260.

"The McAdoo award is popularly supposed to increase rates twenty-five per cent. In some instances, not amounting, however, to a great volume, the McAdoo award exceeds this percentage. In a larger number of instances, owing to maximum advance limitations and to a flat rate increase, which, while advancing in a higher percentage the rate for the shorter mileage, hold down all longer movements, the increase of twenty-five per cent is not obtained.

"The railway statistics for 1917 show the total freight earnings of all systems in Canada as amounting to \$215,245,256. This total amount includes railways which are now under the jurisdiction of Parliament and whose increases are not mirrored in the company's estimates. The difference, however, would not be very great.

"Assuming, however, that the whole amount represented earnings of companies under the jurisdiction of Parliament, and assuming further that the increases under the McAdoo scale would net on the gross the whole twenty-five per cent, which they will not, the total amount of the resultant increases under the McAdoo award would be \$53,811,314. These figures, however, cannot be accepted. On the one hand the freight earnings in 1917 were very large—the volume may not prove representative—but on the other hand as rates have already been increased, the resultant gross revenues may well be much larger. As the board has not had the time necessary to compile statistics based on the newer rates, the American increases which were arrived at as necessary in American territory after much investigation are treated as those necessary, subject to the recommendation hereinafter made for rate reduction.

"It is difficult accurately to forecast the increased gross earnings that the rate increases will give. It is much more difficult to arrive with any degree of accuracy at the result of the net. Traffic conditions and operating expenses constantly change. The authorities of the United States have gone into all the circumstances requiring, and the added expenses necessitating, a rate increase with much care. As a result of this study, in the opinion of those authorities, the so-called 25 per cent increase was necessary.

"It is also true that the increases on a large volume of the traffic will fall a considerable degree short of the 25 per cent increase popularly connected with the McAdoo order, owing to the maximum limitation the order creates and the flat increases in other cases allowed.

"The order in Council was not passed for the purpose of increasing company profits over those of previous years, but for the purpose of meeting the advanced costs of transportation, of preventing strikes, and the collapse of the country's transportation."

INCREASED FREIGHT RATES ON ITALIAN STATE RAILWAYS.—Consul General David F. Wilber, of Genoa, reports an advance in freight rates on the Italian State Railways, effective for internal traffic on June 16 and for international traffic at a date to be fixed later. The new tariff applies to shipments by fast freight, accelerated slow freight, and ordinary slow freight, and also to the conveyance of baggage.

Commission and Court News

Interstate Commerce Commission

The Interstate Commerce Commission has issued a pamphlet of revised regulations for the transportation of explosives, inflammables and other dangerous articles by freight and by express.

The commission's examiner in the Pneumatic Scale Corporation's case relative to the rates on the collapsible container made by that company has decided adversely to the complainant. The Pneumatic Scale Corporation asked for a rate on goods shipped in these containers which would include merely the net weight of the contents and for a lower classification on the collapsed containers returned empty. The examiner believes that the present rates on these containers, both loaded and empty, are not unreasonable and says that while the general use by shippers of a steel container would reduce the loss and damage claims of the carriers due to certain causes, this fact is not sufficient to justify a rule requiring the carriers to compute freight charges on commodities shipped in such containers at the net weight of the contents.

The commission on August 3 announced its opinion that in cases now pending before it, whether heard and submitted or not, relative to carriers now under Federal control, the Director General of Railroads:

1. Is or may be a proper party defendant where the cause of action accrued wholly prior to Federal control, and no order is sought for the future;
2. Is or may be a proper, if not a necessary party defendant where the cause of action accrued in part or in whole during Federal control, and no order is sought for the future;
3. Is a necessary party defendant where the cause of action is as to rates, etc., which since the filing of the complaint have been or shall have been increased or changed by order of the director-general under the Federal control act, and the relief sought includes an order for the future limiting said rates, etc., or fixing their relationship to other rates, etc.

Legality of Express Franks

In the matter of the issuance and use of passes, franks, and free passenger service. Opinion by Commissioner Harlan.

The commission holds as unlawful the free transportation of property upon franks issued by express companies to their officers and employees or to the officers and employees of other common carriers in exchange for passes or franks of such common carriers. This decision confirms Conference Ruling 513 announced on July 20, 1917, which the express companies brought up for further hearing. (50 I. C. C. 599.)

Director General McAdoo, as briefly noted in the *Railway Age* of August 2, page 222, has already instructed the American Railway Express Company to cancel franks previously in use and to issue no new franks.

Lumber from Certain Points in Idaho

Springston Lumber Company et al v. Northern Pacific et al. Opinion by Division 2, Commissioners Clark, Daniels and Woolley.

Combination rates on pine and fir lumber from Harrison, Springston, and Rose Lake, Idaho, to points local to the line of the Northern Pacific, east of Billings, Mont., in Montana, North Dakota, and Minnesota, are found to be prejudicial.

Through routes and joint rates should be established, the latter not to exceed, from the three points of origin to Minneapolis, Minn., the rates from Spokane to the same point of destination, graded westwardly therefrom so as not to exceed 2 cents per 100 lbs. above the rate from Spokane to Beach, N. Dak., at the latter point.

Rates from the three points of origin to Beach should be maintained as maxima to points between Billings and Beach. (50 I. C. C. 591.)

State Commissions

Indiana Interurban Rates

The Public Service Commission of Indiana has given out its decision in the case of the petition by the Interurban roads asking for an advance in freight rates which would put their rates on approximately a par with the increased steam railroad rates. The commission allows slightly higher rates on interurban freight of the fourth, fifth, and sixth classes which, it is understood, includes largely long haul freight. The rates on first, second and third classes of freight are made lower than the steam roads' rates with the purpose of relieving congestion in local freight service on steam roads.

The effect of the order will be to set the interurbans on a plane where their freight service will approach more nearly that of express service, and the order will wipe out applications for through joint rates by the interurbans, under which long hauls were carried by interurbans at far less rates than local freight of the individual companies. The order is limited to "a period of wartime operations, not exceeding two years."

It authorizes interurban utilities to publish and file on one day's notice tariffs stating class freight rates between points in Indiana, which rates shall be as follows:

"First class rates, 21½ cents a 100 pounds for four miles; first class rates for greater distances to be based on 1 cent a 100 pounds for each four miles; second class rates to be 86 per cent of first class rates; third class rates to be 70 per cent of first class rates; fourth class rates to be 55 per cent of first class rates; fifth class rates to be 40 per cent of first class rates, and sixth class rates to be 30 per cent of first class rates.

"It is further ordered that the minimum charge applicable under this order and authorized in this proceeding shall be 35 cents."

Court News

Transfer of Passengers After Wreck

—Duty to Mail Clerks

The Oklahoma Supreme Court holds that where a transfer of passengers is made necessary by reason of a wreck, and the carrier pending such transfer provides for the use of the passengers suitable coaches properly heated, open for their use, in which they might take refuge at all times, it has performed its full duty. And the fact that the employment of a passenger as a railway mail clerk prevents him from occupying such coaches, but requires that he remain outside in charge of the mail, and he thereby contracts an illness, the failure of the carrier to provide him shelter and warmth at the place where the mail is transferred, other than the coaches referred to, does not constitute actionable negligence. —*Lusk v. Wilkes*, (Okla.), 172 Pac. 929. Decided January 9, 1918. Rehearing denied May 21, 1918.

Federal Employers' Liability Act Decisions

The Circuit Court of Appeals, Second Circuit, holds that recovery in an action falling within the federal act, declaring that common carriers shall be liable in damages for injuries due to their negligence, can in no way be modified by the Workmen's Compensation Act of the state in which the accident happened for the word "damages" as used in the federal act means what juries assess according to their own views of value, whereas Workmen's Compensation Acts do not depend on any act of negligence. The federal act supersedes all state laws on the subject with which it deals, and is unaffected by any state act subsequently passed. —*Erie v. Tinnekogel*, 248 Fed., 389. Decided January 16, 1918.

The federal district court for the Western District of South Carolina holds that the fact that the appliance an injured employee was repairing when injured might in the future be used in interstate commerce did not bring him within the act. —*O'Dell v. Southern*, 248 Fed., 343. Decided November 25, 1917.

In another action on the same facts the court holds that an employee, injured while working on an electric motor cannot, though the company was engaged in both interstate and intrastate commerce, be deemed engaged in interstate commerce, if not appearing that the particular motor was in any way used in

interstate commerce.—*O'Dell v. Southern*, 248 Fed., 345. Decided November 19, 1917.

The Idaho Supreme Court holds that a laborer employed in the construction of a fill beneath a wooden trestle, which when completed was intended to take the place of the trestle and to support the track of a railroad company engaged in the transportation of both intrastate and interstate commerce, is not engaged in interstate commerce under the act.—*Kinzell v. C., M. & St. P. (Idaho)*, 171 Pac., 1136. Decided March 26, 1918.

Notice of Title to Goods

The carriage of goods from terminus to terminus on the requirement of a person unlawfully in possession is not a conversion, though if the true owner, before the goods are delivered, intervenes and demands them, and the railroad refuses to deliver them, it is liable in trover. The owner of ore on a mine dump, anticipating that E., the operator of the mine, would endeavor to ship it, notified the railroad and forbade the transportation of the ore. The railroad, when E. offered the ore for transportation, required him to make affidavit that the ore was his, which he did, and the railroad transported the ore for him. The Nevada Supreme Court held the railroad liable to the owner of the ore in conversion, being charged with constructive notice of the owner's right.—*Dixon v. Southern Pac. (Nev.)*, 172 Pac., 368. Decided April 30, 1918.

Presumption as to Working of Block Signals

In an action under the federal Employers' Liability Act for negligently causing the death of the plaintiff's intestate, who was killed in a collision between the locomotive of which he was the engineer and the caboose of a standing train, the New York Appellate Division held that the submission to the jury of the question of the defendant's negligence in operating its block signal system was not justified under the evidence. There was no direct evidence that the block system was not in order and did not work at the time the intestate's train entered the block, or that at any prior or subsequent time it failed to give warning of danger; therefore there was no presumption that the signal failed to operate at the time of the collision.—*Lyman v. D. & H.*, 170 N. Y. Supp. 412. Decided May 17, 1918.

Twenty-eight Hour Law

Under the Twenty-eight Hour Law the shipper may allow the period of confinement to be extended to 36 hours. A railroad company received a shipment of cattle originating in Canada, which the owner had consented should be confined for 36 hours. The railroad confined the animals after receipt in the United States for a period which, added to the time they had been confined in Canada, exceeded 36 hours. The Circuit Court of Appeals, Sixth Circuit, holds that the company was guilty of a violation of the act, which was intended to prevent cruelty to animals, as well as to prevent impairment of their food value, and so it is applicable to shipments originating in Canada, where in the course of interstate commerce they are brought into the United States.—*Grand Trunk Western v. United States*, 248 Fed. 905. Decided April 2, 1918.

Government Control—Local Transportation Facilities

The Nebraska Supreme Court holds that the federal government being in control of the railroads of the country as a war measure, state courts and administrative tribunals should consider the general welfare in adjusting between private-suitors controversies involving the expenditure of railroad funds for the improvement of local transportation facilities. When the enforcement of an order of a state commission made before the United States engaged in the present war would require labor, materials, and money, the commission should have an opportunity for further inquiry in view of changed conditions, and on appeal such an order, (for construction of a station and shipping facilities), was vacated and the proceeding remanded to the Nebraska State Railway Commission for further consideration.—*Ralston Business Men's Assn. v. Bush*, (Neb.), 167 N. W. 727. Decided May 4, 1918.

Supply Trade News

The Thomas A. Edison, Inc., primary battery division has moved its San Francisco office from room 921 Crocker building to room 1205 Hobart building. **E. W. Newcomb** is in charge.

The P. & M. Company has made arrangements with the Ajax Rail Anchor Company, whereby the P. & M. Company takes over the exclusive manufacture and sale of the "Ajax" rail anchors, effective August 1.

At the last meeting of the Board of Directors, **Le Grand Parish**, chairman of the executive committee, was elected president of the Lima Locomotive Works, Incorporated. Mr. Parish will also retain the presidency of the American Arch Company.

The Q. & C. Company, New York, has taken a license for the manufacture and sale of a snow melting device for switches, which is the invention of **Francis Boardman**. This device will be made by the Q. & C. Company under the name of the Q. & C.-Boardman Snow Melting Machine.

The Independent Pneumatic Tool Company has leased the entire sixth floor of the Otis building, at 600 West Jackson boulevard, Chicago, for general offices. The new quarters will be twice as large as those now occupied at 1307 South Michigan avenue. Removal to the new quarters will be effected about September 1.

The Dearborn Chemical Company has just announced the inauguration of a specialties department, for the manufacture and marketing of a number of specialties of interest to manufacturers of steel products. These specialties include a rust preventive known as No-Ox-Id, cutting oils for use in metal cutting, quenching oils, for heat treating, drawing oils and Dearboline, a preparation for cleansing machined parts of emery or grease.

The Lagonda Manufacturing Company, Springfield, Ohio, announces that the Syracuse (N. Y.) district office, in charge of T. X. Lieb, has been moved from 2400 South Salina street to 219 Union Bank building, and that the Cincinnati branch office has been moved from the First National Bank building to 2607 Union Central building. Frank Walmsley, who has handled the Lagonda business in Cincinnati for some time, is in charge.

The Roberts & Schaefer Company, Chicago, has been awarded contracts for railway construction in the past 60 days aggregating \$865,000. Contracts for 21 reinforced concrete automatic electric coaling plants have been secured covering plants having capacities varying from 100 tons to 1,200 tons or a total storage capacity in the aggregate of 8,700 tons. The railroads, capacities and location of these stations are enumerated as follows: A plant for the Philadelphia, Baltimore & Washington, of 1,200 tons at Wilmington, Del.; a plant for the Pennsylvania Railroad, of 600 tons at Gardenville terminal, and another at Buffalo, N. Y.; a plant for the Pennsylvania Lines of 700 tons at Canton, Ohio, one of 700 tons at Crestline, Ohio, one of 700 tons at Mingo Jct., Ohio, one of 1,000 tons at Girard, Ohio, and one of 200 tons at Wheatland, Pa.; one for the Pere Marquette of 500 tons at Wyoming, Mich., one of 150 tons at Grand Jct., Mich., and one of 250 tons at New Buffalo, Mich.; a plant for the Terminal Railroad Association of St. Louis of 300 tons at St. Louis, Mo., and one of 300 tons at Madison, Ill.; one for the Toledo & Ohio Central of 300 tons at Columbus, Ohio; a plant for the New York Central Lines of 300 tons at Coalburg, Ohio; also a cinder handling plant at Minerva, Ohio, a coaling plant of 100 tons at Ft. Wayne, Ind., and a cinder handling plant at Coalburg, Ohio; a plant for the Chesapeake & Ohio of 500 tons capacity at Handley, W. Va.; one for the Pennsylvania Railroad of 200 tons capacity at South Oil City, Pa.; one for the St. Louis Southwestern of 200 tons at Jonesboro, Ark., and one of 200 tons at Commerce, Texas; and also one plant for the Nashville, Chattanooga & St. Louis of 300 tons at Atlanta, Ga. (frame plant).

Trade Publications

INDUSTRIAL TRANSPORTATION.—The Baker R. & L. Company, Cleveland, Ohio, has issued two 16-page booklets, one entitled, "Utility Trucks" and the other, "Tractors." These describe equipment manufactured by that company for all manner of industrial and commercial purposes. The various parts of the machines are described in detail with the use of outline and phantom drawings.

WELDING AND CUTTING APPARATUS.—The Bastian-Blessing Company, Chicago, has issued a 26-page catalogue illustrating complete units of Rego welding and cutting apparatus, and giving complete descriptions of the cutting and welding torch details and the Rego diaphragm regulator details. The company's line of oxygen, acetylene and hydrogen welding regulators and adapters is also illustrated.

RESEATING MACHINES.—Bulletin G-2, recently published by the Lagonda Manufacturing Company, Springfield, Ohio, describes that company's electric, air, steam and water-driven reseating machines for boiler caps and headers. These machines are portable and are especially designed for use on boilers of the Babcock & Wilcox type, using ground joints between caps and cap seats in the headers.

MOTOR TRUCKS AND GISHOLT LATHES.—In order to show how motor trucks are used in the war and how Gisholt turret lathes are used to manufacture some of the mechanical parts, the Gisholt Machine Company, Madison, Wis., has prepared an attractive booklet entitled Motor Trucks in the War. It contains a large number of illustrations showing cars actually in war service, detail drawings of parts manufactured on Gisholt machines and illustrations showing the tooling of the lathes to perform these operations.

BATTERY CHARGING EQUIPMENT.—The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., has recently issued a four-page illustrated pamphlet describing the C-H sectional battery charging equipment for electric vehicles and industrial trucks. Some of the distinctive points claimed for this kind of equipment are the adoption of a standard unit as the basis for forming panels and groups of panels, and the ability to make future equipment conform and be an addition to present equipment.

ELECTRICAL MEASURING INSTRUMENTS.—The Potentiometer System of Pyrometry and Temperature Control is the title of a 60-page catalogue published by the Leeds & Northrup Company, Philadelphia, Pa., to describe its system of pyrometry and temperature control, in which the potentiometer method is employed for measuring the electromotive force of thermocouples. The catalogue contains many illustrations, and other electrical measuring instruments manufactured by the Leeds & Northrup Company are also described.

METAL CUTTING TOOLS.—The Lovejoy Tool Company, Inc., Springfield, Vt., in presenting this, its first catalogue of patented inserted-cutter tools, states that it has been the intention of the company to design a line of tools closely approaching the solid-forged tool in respect to rigidity, unnecessary overhang and objectionable projection. It is claimed that the Lovejoy inserted-cutter tools are positively locked and have the merits of the solid tool. Turning, facing and planing tools of this type, boring or facing bars, and patented end-milling cutters are illustrated and briefly described.

"UNDER-FRAME" CAR LIGHTING EQUIPMENT.—The Safety Car Heating & Lighting Company, 2 Rector Street, New York, has issued a 28-page book as a reference for the man who operates "under-frame" equipment. It is called Operation of Safety "Under-Frame" Car Lighting Equipment. The object of the book is to state briefly and concisely the essential points regarding the installation and operation of "under-frame" dynamos and type-F regulators. The first part is given over to such subjects as installation of dynamo and suspension, lining up dynamo, belt lengths, to measure belt lengths, application of belt fasteners, care of under-frame suspension, operation of Safety Type F dynamo regulator, method of adjusting automatic switch with car in yards, etc. The latter part of the book is given over to assembly and detail drawings, each detail part is numbered and named. The book is complete and well worth the attention of any one interested in car lighting equipment.

Financial and Construction

Railway Financial News

BALTIMORE & OHIO.—Directors have postponed action on the common stock dividend pending the working out of the terms of the contract with the government. The regular semi-annual dividend of 2 per cent, however, was declared on the preferred.

BUFFALO, ROCHESTER & PITTSBURGH.—A semi-annual dividend of 2 per cent has been declared on the common stock, comparing with 3 per cent paid semi-annually in 1917. This reduces the annual rate from 6 per cent to 4 per cent. Following the meeting of the board of directors, President Noonan made the following statement:

"The board adopted an ultra-conservative dividend policy on the understanding that the present action would not prejudice future distributions. I was in Washington earlier this week and pointed out to John Skelton Williams that the Buffalo, Rochester & Pittsburgh had paid 4 per cent on the common during each of the first two years of the test period and 6 per cent during the third. In addition it paid 3 per cent last February, so that the present declaration makes 5 per cent for the year, which is about the average for the test period.

"The Railroad Administration has advanced to our road more than \$2,000,000 for additions and betterments, as well as a large percentage of the estimated rental compensation. The road's finances are in a satisfactory position, and we contemplate its financing this year."

DENVER & RIO GRANDE.—The regular semi-annual interest of three and one-half per cent on the adjustment bonds has been declared payable October 1. This calls for a payment of \$350,000. The Bankers Trust Company has made the following announcement:

"We announce that the United States government has arranged with Alexander R. Baldwin, receiver, to provide funds sufficient to pay the interest due August 1 upon the first and refunding 5s of the Denver & Rio Grande Railroad Co., and also to complete the sinking fund payment under that mortgage. The advance by the government, it is understood, does not take the form of a loan, but an advance of rentals due from the government under its operation of the railroad."

WABASH.—The directors have deferred declaring the semi-annual dividend on the profit sharing preferred stock A until the government and the railroad company have finally agreed as to what compensation should be paid and the contract with the government executed.

Railway Construction

BALTIMORE & OHIO.—Repair shops for the Baltimore & Ohio are being built at Cumberland, Md., by Westinghouse, Church, Kerr & Company; a contract for the steel fabrication has been given to the Lackawanna Bridge Company.

DELAWARE & HUDSON.—This company has given a contract to M. E. Ryan & Company, of Schenectady, N. Y., to build a new freight office on the corner of Maple and Walnut streets, Glens Falls, N. Y. It is to have two stories and basement and will be 38 ft. wide and 39 ft. long, with concrete foundation, brick walls, frame floors and roof. The cost of this work will be about \$16,000.

TOLEDO & OHIO CENTRAL.—This company is contemplating the expenditure of \$20,000 in improvements at Fostoria, Ohio. The company has purchased the water right of an abandoned quarry there and will construct a water softener plant in the north railroad yards.

VIRGINIAN RAILWAY.—This company is carrying out double tracking work from Sewalls Point (Va.) terminal westerly to South Branch yard, 13.3 miles. Track has already been laid on 3.7 miles. The contract has been given to the James Stewart Construction Company, Norfolk, Va.

Railway Officers

Railroad Administration

Federal and General Managers

J. M. Gruber, vice-president and general manager of the Great Northern at St. Paul, Minn., has been appointed federal general manager with the same headquarters, effective August 1.

H. G. Hetzler, president of the Chicago & Western Indiana and the Belt Railway of Chicago, with headquarters at Chicago, has been appointed general manager of these roads, effective August 1.

J. M. Hannaford, federal manager of the Northern Pacific, with headquarters at St. Paul, Minn., has had his jurisdiction extended to include the Camas Prairie Railroad, effective August 1.

B. F. Parsons, assistant general freight agent on the Chicago Great Western, at Chicago, has been appointed assistant to the general manager, with headquarters at Chicago, effective August 1.

F. C. Batchelder, vice-president of the Baltimore & Ohio, at Chicago, has been appointed general manager of the Baltimore & Ohio Chicago Terminal, with headquarters at Chicago, effective August 1.

A. J. Davidson, general manager of the Spokane, Portland & Seattle, with headquarters at Portland, Ore., has had his jurisdiction extended to include the Oregon Electric and the Oregon Trunk, effective August 1.

W. L. Park, general manager of the Chicago Great Western, with headquarters at Chicago, has had his jurisdiction extended to include the Leavenworth Terminal Railway & Bridge Company, effective August 1.

George Hannauer, general manager of the Indiana Harbor Belt, with headquarters at Gibson, Ind., has been appointed federal general manager of the same railroad, with the same headquarters, effective August 1.

W. P. Kenney, federal manager of the Great Northern, with headquarters at St. Paul, Minn., has had his jurisdiction extended to include the Farmers Grain & Shipping Company and the Minneapolis Belt Line, effective August 1.

S. M. Rogers, vice-president of the Elgin, Joliet & Eastern, with headquarters at Chicago, has been appointed general manager of that road and of the Chicago, Milwaukee & Gary, with the same headquarters, effective August 1.

W. D. Duke, general superintendent of the Richmond, Fredericksburg & Potomac, has been appointed general manager of the same road and the Washington Southern (not including Potomac yards), with headquarters at Richmond, Va.

M. Jeffers, vice-president and general manager of the Union Pacific, at Omaha, has been appointed general manager of the Union Pacific and terminal manager for operations on all lines in Omaha, South Omaha and Council Bluffs.

W. J. O'Brien, general superintendent of the Chicago Junction, with headquarters at Chicago, has been appointed general manager of the same road and of the Chicago River & Indiana, with headquarters at Chicago, effective August 1.

The authority of **F. H. Alfred**, federal manager of the Pere Marquette, with office at Detroit, Mich., has been extended over the car ferry lines on Lake Michigan, formerly operated by the Ann Arbor, the Pere Marquette, and the Grand Trunk.

H. E. Byram, federal manager of the Chicago, Milwaukee & St. Paul, has had his jurisdiction extended to include the Escanaba & Lake Superior, the Ontonagon Railroad and the Port Townsend & Puget Sound, with headquarters at Chicago, Ill., effective August 1.

W. L. Mapother, federal manager of the Louisville & Nashville, the Louisville, Henderson & St. Louis, the Nashville, Chattanooga & St. Louis, and the Tennessee Central, has been appointed federal manager also of the Birmingham & Northwestern, with office at Louisville, Ky.

The authority of **E. J. Pearson**, federal manager of the New York, New Haven & Hartford and the Central New England with office at New Haven, Conn., has been extended over the New York Connecting Railroad, the Narragansett Pier Railroad and the Wood River Branch Railroad.

C. M. Kittle, federal manager of the Illinois Central, the Yazoo & Mississippi Valley, the Gulf & Ship Island, the Mississippi Central and the New Orleans Great Northern, with headquarters at Chicago, has had his jurisdiction extended to include the St. Charles Air Line, effective August 1.

C. E. Johnston, general manager of the Kansas City Southern, the Texarkana & Ft. Smith, the Midland Valley, the Houston, East and West Texas, and the Vicksburg, Shreveport & Pacific, has had his jurisdiction extended to include the Joplin (Mo.) Union Depot Company, effective July 22.

George W. Stevens, federal manager of the Chesapeake & Ohio, east of Louisville, Ky., Columbus and Cincinnati, Ohio, including the Chesapeake & Ohio Northern and the Ashland Coal & Iron Railway, with office at Richmond, Va., has had the authority extended over the Sandy Valley & Elkhorn, and the Long Fork Railways.

G. R. Huntington, federal manager of the Minneapolis, St. Paul & Sault Ste. Marie, and the Duluth, South Shore & Atlantic, with headquarters at Minneapolis, Minn., has had his jurisdiction extended to include the Copper Range, the Lake Superior Terminal & Transfer and the Mineral Range, effective August 1.

G. L. Peck, federal manager of the Pennsylvania Railroad, western lines, the Cincinnati, Lebanon & Northern, and the Lorain, Ashland & Southern, with headquarters at Pittsburgh, Pa., had his jurisdiction extended to include the Pittsburgh, Chartiers & Youghiogeny, the Calumet Western, the Englewood Connecting Railway and the South Chicago & Southern.

A. W. Trenholm, federal manager of the Chicago, St. Paul, Minneapolis & Omaha, with headquarters at St. Paul, Minn., has also been appointed federal manager of the Minneapolis Eastern, the Minnesota Transfer, the St. Paul Bridge & Terminal and the St. Paul Union Depot Company, effective August 1. Mr. Trenholm also has jurisdiction over the terminals of all railroads entering St. Paul and Minneapolis.

J. P. O'Brien, federal general manager of the Oregon-Washington Railroad & Navigation Company, has been appointed federal manager of that road, and the Northern Pacific Terminal Company of Oregon, Portland, Ore.; the Pacific & Eastern; the Pacific Coast Railroad; the San Francisco & Portland Steamship Company; and the Southern Pacific Lines north of Ashland, Ore., effective August 1. Mr. O'Brien's headquarters are at Portland, Ore.

D. L. Bush, vice-president of the Chicago, Milwaukee & St. Paul, at Chicago, and **J. W. Taylor**, assistant to the president, have been appointed assistants to the federal manager, with headquarters at Chicago. **J. T. Gillick**, general manager, has been appointed general manager of the lines east of Moberg, S. D., with headquarters at Chicago. **H. B. Earling**, vice-president at Seattle, Wash., has been appointed general manager of the lines west of Moberg, S. D., with headquarters at Seattle, effective August 1.

George T. Reid, assistant to the president of the Northern Pacific, with office at Tacoma, Wash.; **W. H. Wilson**, assistant to the vice-president at St. Paul, Minn., and **R. W. Clark**, have been appointed assistants to the Federal manager. Mr. Reid will have his headquarters at Tacoma, and will also have charge of legal matters on the western lines. Messrs. Clark and Wilson will have their headquarters at St. Paul. **J. M. Rapelje**, acting vice-president of the Northern Pacific lines east of St. Paul, has been appointed general manager with headquarters at St. Paul, effective August 1.

Operating

John H. Robinson has been appointed trainmaster of the Northern Pacific, with office at Seattle, Wash.

R. W. Ellsworth has been appointed assistant trainmaster on the Ontario division of the New York Central, with office at Oswego, N. Y., vice **R. W. Nutting**, resigned.

R. G. Kenly, general manager of the Minneapolis & St. Louis, with headquarters at Minneapolis, Minn., has been appointed general superintendent, with the same headquarters, effective August 1.

I. O. Wilson has been appointed chief dispatcher of the Atchison, Topeka & Santa Fe, at Amarillo, Tex., succeeding **H. G. Odell**, who has received a commission as captain in the Sixty-sixth Engineers of the United States army.

D. H. Beatty has been appointed superintendent of safety of the Southern Railway system, the Georgia Southern & Florida, the Alabama & Vicksburg, the Carolina, Clinchfield & Ohio, and other lines under the jurisdiction of **E. H. Coapman**, federal manager, with headquarters at Washington, D. C.

Martin Quick, supervisor of the labor and safety bureau of the Erie Railroad, at New York, has been appointed assistant to general manager of the Erie, the Chicago & Erie, the New Jersey & New York, the Bath & Hammondsport and the New York, Susquehanna & Western, and **Archibald K. Stone** has been appointed safety supervisor of the same roads; both with headquarters at New York.

F. G. Munnick, superintendent of freight transportation of the Pittsburgh & Lake Erie, has been appointed operating assistant of the same road, the Lake Erie & Eastern, and the Monongahela Railway, with headquarters at Pittsburgh, Pa. **W. F. Brunner** has been appointed assistant to general manager with office at Pittsburgh of all the above named roads, and **G. B. Obey**, general superintendent and purchasing agent of the Monongahela Railway, is now general superintendent of the same road with headquarters at Brownsville, Pa.

W. C. Hurst, vice-president and general manager of the Chicago, Peoria & St. Louis has been appointed general superintendent of that road and the Chicago & Alton, with headquarters at Bloomington, succeeding **X. H. Cornell**, transferred to Chicago as superintendent of the Chicago terminals of the Alton, succeeding **Charles W. Miller**, who died on August 7. **James J. Butler**, assistant to general manager of the Alton, at Bloomington has been appointed assistant superintendent of the Chicago, Peoria & St. Louis, with office at Springfield, Ill.

H. A. Gausewitz, general superintendent of the Fort Worth & Denver City, at Fort Worth, Texas, has been appointed general superintendent of the Missouri, Kansas & Texas, west of Whitesboro; the Texas, Wichita Falls & North Western; the Fort Worth & Denver City; the Wichita Valley and the Abilene & Southern, with headquarters at Fort Worth, Texas. **H. E. McGee**, superintendent of the Missouri, Kansas & Texas, at Parsons, Kan., has been appointed general superintendent of the Missouri, Kansas & Texas of Texas (except lines west of Whitesboro, Texas), and the Houston & Texas Central, with headquarters at Dallas, Texas.

Sidney Upson Hooper, whose appointment as superintendent of transportation, western lines, of the Baltimore & Ohio with headquarters at Cincinnati, Ohio, has already been announced in these columns, was born on May 5, 1880, at Brookline, Mass. He was educated at Yale University, and began railway work in June, 1903, with the New York Central & Hudson River. From 1904 to 1911 he served consecutively as yard clerk, switchman and yardmaster on the Great Northern, the Northern Pacific, the Oregon Short Line and the Southern Pacific. On October 1, 1911, he entered the service of the Baltimore & Ohio as supervisor of yards and terminals, and in August of the following year, was appointed supervisor of transportation. From February, 1913, to June, 1917, he was trainmaster of the Chicago and Indiana divisions; then to February, 1918, he was assistant superintendent of the Toledo division, and since the latter date served as assistant superintendent of transportation at Cin-

cinnati, Ohio, until his recent appointment as superintendent of transportation, as above noted.

W. Y. Brown, chief clerk in the car service department of the Terminal Railroad Association, of St. Louis, has been appointed superintendent of car service, succeeding **Edward Clem-**



W. Y. Brown

ens, who has been appointed assistant to the terminal manager of the St. Louis-East St. Louis district. Mr. Brown was born at Providence, R. I., in 1875. In 1890 he entered railroad service as a messenger at St. Joseph, Mo., in a car accountant's office. He was appointed chief clerk and car distributor on the Missouri Lines of the Chicago, Burlington & Quincy, in 1898, and in 1901 he was appointed chief clerk in the trainmaster's office of the Council Bluffs division. Two years later he left the service of that company to become chief

Association, at St. Louis, Mo., which position he held until his clerk in the car service department of the Terminal Railroad promotion to superintendent of car service, as mentioned above.

Ellis Eugene Dildine, whose appointment as superintendent of telegraph of the Northern Pacific, with headquarters at St. Paul, Minn., was announced in the *Railway Age* of July 26, was born at Hawtreys, Ont., on September 1, 1866. Mr. Dildine began railway work with the Flint & Pere Marquette, now the Pere Marquette, on September 15, 1883. The following year he entered the service of the Canada Southern, now the Michigan Central, with which he remained until 1886, when he went with the Northern Pacific. Mr. Dildine has been with that road continuously ever since, except for a short period in 1892, during which time he was connected with the Canadian Pacific Tele-



E. E. Dildine

graph Company, at Toronto, Ont., and with the Western Union Telegraph Company, at Chicago. Mr. Dildine's first position with the Northern Pacific was telegraph wire chief; subsequently he became office manager, and later assistant superintendent of telegraph, with headquarters at Tacoma, Wash., which position he held at the time of his promotion to superintendent of telegraph, as noted above.

Victor Parvin, superintendent of the Virginian Railway at Princeton, W. Va., has been appointed assistant superintendent, with headquarters at Princeton, W. Va.; **W. H. Myers** has been appointed trainmaster, with headquarters at Princeton, in charge of the territory Princeton to Roanoke, and the position of assistant trainmaster has been abolished; **George Gieger** has been appointed trainmaster, with headquarters at Princeton, vice **J. W. White**. **G. E. Carr** has been appointed trainmaster, vice **J. F. Duesenberry**, assigned to other duties. **J. W. White** has been appointed chief dispatcher, vice **A. S. Fortune**, who has been appointed night chief dispatcher, vice **J. S. S. Leach**, assigned to other duties.

M. McKernan, whose appointment as superintendent of the southern Kansas division of the Missouri Pacific, with

headquarters at Coffeyville, Kan., succeeding **R. G. Gorden**, was announced in the *Railway Age* on June 7, has since been appointed superintendent of safety of the Missouri Pacific system. Mr. McKernan was born on September 9, 1868. He began his railroad career as a brakeman on the Erie at Susquehanna, Pa., in 1886. The following year and until 1889 he was a conductor on the same road. He then went with the Chicago, St. Paul, Minneapolis & Omaha as yardmaster, at St. Paul, Minn. Later he became a conductor, and in 1892 he worked in the same capacity on the Wisconsin Central, now a part of the Minneapolis, St. Paul & Sault Ste. Marie, at Waukesha, Wis. Two years later he became agent of the Chicago & Northern Pacific, now the Baltimore & Ohio Chicago Terminal, at Chicago, and until 1900 was subsequently trainmaster and superintendent. In 1900 he entered the service of the Northern Pacific as trainmaster at Duluth, Minn., where he remained until 1903, at which time he became trainmaster on the Chicago, Rock Island & Pacific, at Rock Island, Ill. In 1911 he left the service of that company to go with the Missouri Pacific, as assistant to the general manager. In the early part of 1918 he became acting superintendent of the Wichita division.

Financial, Legal and Accounting

Rush N. Harry, local treasurer of the Cleveland, Cincinnati, Chicago & St. Louis, at Cincinnati, Ohio, has been appointed federal treasurer.

Jos. B. Lacy, treasurer of the Norfolk & Western, with office at Roanoke, Va., has been appointed federal treasurer, with office at Roanoke.

D. W. Bigoney, local treasurer of the Erie, with office at New York, has been appointed federal treasurer, and his former position has been abolished.

H. A. Gray, controller of the Northern Pacific, with headquarters at St. Paul, has been appointed federal auditor. **C. A. Clark**, treasurer at St. Paul, has been appointed federal treasurer, effective August 1.

G. J. Bunting, controller of the Chicago, Milwaukee & St. Paul, with headquarters at Chicago, has been appointed federal auditor. **A. G. Loomis**, treasurer, has been appointed federal treasurer, effective August 1.

Charles Jensch, controller of the Chicago, St. Paul, Minneapolis & Omaha, with headquarters at St. Paul, Minn., has been appointed federal auditor. **C. P. Nash**, local treasurer, has been appointed federal treasurer, effective August 1.

O. F. Gnadinger, claim agent on the Elgin, Joliet & Eastern, with headquarters at Joliet, Ill., has been appointed supervisor of safety, with the same headquarters, effective August 1. Mr. Gnadinger will continue to act as claim agent.

W. W. Cole, assistant treasurer of the Minneapolis & St. Louis, with headquarters at Minneapolis, Minn., has been appointed federal treasurer, with the same headquarters. **A. E. Smith**, controller, has been appointed federal auditor.

L. G. Scott, controller of the Wabash, with headquarters at St. Louis, Mo., has been appointed acting treasurer, succeeding **A. D. McDonald**, who has resigned to resume his duties as vice-president and controller of the Southern Pacific, at New York.

William B. McKinstry, controller of the Central of Georgia, has been appointed general auditor, and **Walter C. Askew**, treasurer, has been appointed federal treasurer of the Central of Georgia lines, under the United States Railroad Administration; both with headquarters at Savannah, Ga.

J. F. Meyer, assistant treasurer of the Oregon-Washington Railroad & Navigation Company, with headquarters at Portland, Ore., has been appointed federal treasurer. **R. Blaisdell**, auditor, has been appointed federal auditor. **A. C. Spencer**, general attorney, has been appointed general solicitor, effective August 1.

C. D. Brandriff, general auditor of the Chicago & North Western, with headquarters at Chicago, has been appointed federal auditor, with the same headquarters. **A. B. Jones**, local treasurer at Chicago, has been appointed federal treasurer, with the same headquarters, effective August 1.

Carey & Kerr, Portland, Ore., have been appointed general solicitors for the Spokane, Portland & Seattle, with the same headquarters. **G. R. Williams** has been appointed federal auditor, and **F. A. Smith** has been appointed federal treasurer, with headquarters at Portland, effective August 1.

A. E. Miller has been appointed general solicitor of the Duluth, South Shore & Atlantic, with headquarters at Marquette, Mich. **A. E. Delf**, controller, with headquarters at Marquette, Mich., has been appointed federal auditor. **W. J. Ellison**, treasurer, has been appointed federal treasurer, with headquarters at Marquette, effective August 1.

M. L. Countryman, general attorney for the Great Northern at St. Paul, Minn., has been appointed general solicitor with the same headquarters; **F. A. Barnes**, assistant controller, has been appointed federal auditor; and **L. E. Katzenbach**, secretary and treasurer with headquarters at St. Paul, Minn., has been appointed federal treasurer, effective August 1.

W. H. Jacobs, member of the firm of Winston, Strawn & Shaw, attorneys, Chicago, has been appointed general solicitor of the Chicago Great Western, with headquarters at Chicago. **C. F. Krebs**, general auditor of the Chicago Great Western, at Chicago, has been appointed federal auditor; and **J. F. Cockendall**, treasurer at Chicago, has been appointed federal treasurer, effective August 1.

H. B. Dike, assistant to the president of the Minneapolis, St. Paul & Sault Ste. Marie, at Minneapolis, Minn., has been appointed general solicitor, with the same headquarters. **C. W. Gardner**, controller, has been appointed federal auditor at Minneapolis. **C. F. Clement**, treasurer, with headquarters at Minneapolis, has been appointed federal treasurer with the same headquarters, effective August 1.

E. H. Kennedy, auditor of the Pittsburgh & Lake Erie, has been appointed general auditor of the same road, the Lake Erie & Eastern and the Monongahela Railway, with office at Pittsburgh, Pa.; **W. M. Doulin**, local treasurer and secretary of the Pittsburgh & Lake Erie, has been appointed treasurer with office at Pittsburgh, and **Reed, Smith, Shaw & Beal** have been appointed general attorneys for all the above named roads.

F. P. Johnson, assistant general auditor of the Missouri Pacific, at St. Louis, Mo., has been appointed general auditor of the Missouri Pacific Railroad, vice **J. G. Drew**, resigned to go with Missouri Pacific Railroad Corporation. **T. M. Niven**, auditor of disbursements at St. Louis, Mo., has been appointed assistant general auditor; **C. B. Moore** has been appointed auditor disbursements, and **C. B. Milsom** has been appointed general accountant; all with offices at St. Louis, Mo.

Traffic

B. B. Stowits, live stock agent of the Erie Railroad, lines east of Buffalo and Salamanca, has been appointed general live stock agent, with office at Buffalo, N. Y.

H. M. Pearce, general traffic manager of the Chicago, St. Paul, Minneapolis & Omaha, with headquarters at St. Paul, Minn., has been appointed traffic manager, effective August 1.

W. L. Martin, vice-president of the Minneapolis, St. Paul & Sault Ste. Marie, at Minneapolis, Minn., has been appointed traffic manager with the same headquarters, effective August 1.

J. B. Baird, freight traffic manager of the Northern Pacific, with headquarters at St. Paul, Minn., has been appointed traffic manager, with the same headquarters, effective August 1.

G. H. Smitton, general traffic manager of the Great Northern, with headquarters at St. Paul, Minn., has been appointed traffic manager, with the same headquarters, effective August 1.

F. B. Townsend, vice-president of the Minneapolis & St. Louis, with headquarters at Minneapolis, Minn., has been appointed traffic manager, with the same headquarters, effective August 1.

J. M. Cutler, general freight agent of the Southern Railway System and the Georgia, Southern & Florida, with office at

Macon, Ga., has had his authority extended to embrace the line of the Hawkinsville & Florida Southern.

H. R. McCullough, vice-president of the Chicago & North Western, with headquarters at Chicago, has been appointed traffic manager. **A. C. Johnson**, general traffic manager, has been appointed assistant traffic manager, effective August 1.

W. H. Tayloe, passenger traffic manager of the Southern Railway, lines east, with office at Washington, D. C., has been appointed a member of the Southern Passenger Traffic Committee, with office at Atlanta, Ga., vice **S. G. Hatch**, deceased.

Edgar W. Perrott, chief clerk in the office of the superintendent of freight transportation of the Pennsylvania Lines West of Pittsburgh, with office at Pittsburgh, Pa., has been appointed assistant to the superintendent of freight transportation.

J. B. Nettle, general freight agent, and **L. A. Robison**, general passenger agent, of the Pittsburgh & Lake Erie, have been appointed to the same positions also on the Lake Erie & Eastern and the Monongahela Railway; both with headquarters at Pittsburgh, Pa.

Tinsley Smith, division freight and passenger agent of the Central of Georgia, with office at Chattanooga, Tenn., has resigned to engage in other business, and **E. B. Lewis**, commercial agent at Chattanooga, is now in charge of freight and passenger traffic in Chattanooga territory.

Stanley D. Roberts, general advertising agent of the Chicago, Milwaukee & St. Paul, at Chicago, resigned on August 1, to go with the Hebe Company, a subsidiary of the Carnation Milk Products Company, at Chicago, as a special representative in connection with publicity work.

R. M. Calkins, vice-president of the Chicago, Milwaukee & St. Paul, at Chicago, who has just been appointed traffic manager of that road, under the Railroad Administration, will resign on August 15, to represent the Australian Government in supervising the ship building program in Puget Sound.

C. L. Chapman, assistant general traffic manager of the Erie, with office at New York, has been appointed acting general passenger agent, with headquarters at New York during the absence on furlough of **R. H. Wallace**, general passenger agent, and **G. M. Craig**, assistant general passenger agent.

Engineering and Rolling Stock

F. P. Roesch has been appointed supervisor of the fuel conservation section for the Northwestern region, with headquarters at Chicago.

J. W. Hardy has been appointed supervisor of the fuel conservation section for the Southwestern Region, with headquarters at St. Louis, Mo.

H. H. Baxter, chief draftsman in the signal department of the Chicago & North Western, has been promoted to superintendent of construction, with headquarters at Chicago, effective August 1.

S. J. Williams, Jr., principal assistant engineer on the Wheeling & Lake Erie, with headquarters at Cleveland, Ohio, has resigned to take a position with the M. A. Hanna Coal Company, in the same city.

W. R. McMunn, general car inspector of the New York Central, Buffalo and East, with office at Albany, N. Y., has been appointed assistant to superintendent of rolling stock, with office at New York, vice **A. E. Calkins**.

J. A. Atwood, chief engineer of the Pittsburgh & Lake Erie, has been appointed chief engineer also of the Lake Erie & Eastern and the Monongahela Railway, with office at Pittsburgh, Pa. **D. K. Orr**, chief engineer of the Monongahela Railway, is now assistant engineer of the same road, with office at Brownsville, Pa.

F. W. Taylor has been appointed mechanical superintendent of the Missouri, Kansas & Texas of Texas; the Wichita Falls & North Western; the Fort Worth & Denver City; the Wichita Valley; the Houston & Texas Central; the Union Terminal of Dallas, and the Abilene & Southern, with office at Denison, Texas.

L. H. Turner, superintendent of motive power, of the Pittsburgh & Lake Erie, has been appointed superintendent of motive power also of the Lake Erie & Eastern and the Monongahela Railway, with office at Pittsburgh, Pa.

E. R. Lewis, assistant to the general manager, in charge of engineering on the Duluth, South Shore & Atlantic, with headquarters at Duluth, Minn., has been appointed chief engineer, with the same headquarters, effective August 1.

J. P. Zahnen, pilot engineer on signal valuation for the Chicago, Rock Island & Pacific, with headquarters at Chicago, has been appointed construction engineer for the signal department, with the same headquarters, effective August 1.

F. L. Nicholson, chief engineer of the Norfolk Southern, with office at Norfolk, Va., has been appointed consulting engineer of the Virginian Railway, with office at Norfolk, with the same authority as the chief engineer, reporting to the federal manager, during the absence on account of illness of **H. Fernstrom**, chief engineer.

L. R. Pyle, fuel supervisor of the Minneapolis, St. Paul & Sault Ste. Marie, at Minneapolis, Minn., has been appointed supervisor of the fuel conservation section for the Central Western region, with headquarters at Chicago. Mr. Pyle will give special attention to the conservation of fuel used on locomotives, in shops, at terminals, at water stations, and for all miscellaneous purposes. He will also give attention to the preparation of fuel received and to its quality; and will make investigations and recommendations with respect to its transportation and its handling at fuel stations.

Harry Keiter Fox, whose appointment as mechanical engineer of the Chicago, Milwaukee & St. Paul, with headquarters at Chicago, was announced



H. K. Fox

in the *Railway Age* on July 19, was born in Washington county, Maryland, on October 14, 1881. Mr. Fox was educated in the Washington County Academy, graduating in 1900. In September, six years later, he began his railroad career, entering the service of the Norfolk & Western, at Roanoke, Va., with which company he remained for about three years, following which he entered the employ of the Pennsylvania Railroad, at Pittsburgh, where he remained until November, 1911, when he became draftsman on the Western Maryland, at Hagerstown, Md. In October, two years later, he was promoted to motive power inspector, and in October, 1916, he became chief draftsman. On March 8, 1918, Mr. Fox was appointed engineer of tests of the Chicago, Milwaukee & St. Paul, at Milwaukee, Wis., which position he held until his promotion to mechanical engineer on July 8, as mentioned above.

The following appointments have been made for all lines under the jurisdiction of **J. L. Lancaster**, federal manager; **A. A. Matthews**, chief engineer of the St. Louis Southwestern, at Tyler, Texas, has been appointed assistant chief engineer, at Dallas, Texas; **E. S. Pennbaker**, has been appointed assistant to chief engineer at Dallas; **R. L. Holmes**, assistant engineer of the Texas & Pacific has been appointed engineer of water supply, at Dallas; **E. P. Weatherby**, signal engineer, of the Texas & Pacific has been appointed signal engineer at Dallas; **W. G. Williams** has been appointed bridge engineer at Dallas; **F. A. Mote** has been appointed assistant engineer at Marshall, Texas; **F. N. Baldwin**, terminal engineer of the Trans-Mississippi terminal, at New Orleans, La., has been appointed assistant engineer at New Orleans.

Corporate

Executive, Financial, Legal and Accounting

F. C. Baird has been elected vice-president in charge of the traffic and transportation departments of the Montour Railroad, with headquarters at Pittsburgh, Pa.

The corporate organization of the Central of Georgia is now as follows: **Charles A. Peabody**, chairman of the board; **Alexander R. Lawton**, president; **Charles F. Groves**, secretary and treasurer; **James G. Corbett**, assistant secretary; **Merle F. Harden**, controller and **Joseph W. Fox**, chief engineer; all with headquarters at Savannah, Ga., except Mr. Peabody, whose headquarters are at New York.

The following corporate officers of the Pennsylvania Railroad, have been elected corporate officers also of the Long Island Railroad: **Samuel Rea**, president; **Henry Tatnall**, vice-president and treasurer; **A. J. County**, vice-president (he will also act as controller); **Lewis Neilson**, secretary, and **Thomas W. Hulme**, general real estate agent. The following corporate officers were also elected on the New York, Philadelphia & Norfolk: **Henry Tatnall**, treasurer; **Henry H. Lee**, assistant treasurer; **H. C. Lawser**, cashier; **Thomas W. Hulme**, general real estate agent; **F. J. Bell, Jr.**, assistant controller; **J. G. Rodgers**, engineer maintenance of way and equipment; **H. C. Booz**, corporate engineer. **A. J. County**, controller, is acting for **C. M. Bunting**, who is now furloughed in the United States army service.

Charles E. Perkins, whose election as president of the Chicago, Burlington & Quincy was announced in the *Railway Age* on July 26, was born at Burlington, Iowa, on February 21, 1881. Mr. Perkins is the son of Charles E. Perkins, deceased, who was president of the Burlington from 1881 to 1900, a period of almost 20 years. The present Mr. Perkins was educated at Harvard University, graduating in 1904. In 1914, he was appointed co-receiver for the Brazil Railway and the Uruguay Railway, with headquarters at New York. At that time, Mr. Perkins made a personal inspection of the properties. He has been a director of the Burlington for a number of years and is president of the International Products Company, of New York. Since 1914, he has been receiver for the Brazil Land, Cattle & Packing Company, with headquarters at New York. He is also president of the Lincoln Land Company and the Northwestern Cabinet Company at Burlington, Iowa.

Frank S. Elliott, formerly general superintendent of the Lake district, on the Great Northern, with headquarters at Superior, Wis., has been elected president of the Spokane & Inland Empire and the United Railways, with headquarters at Portland, Ore., succeeding **L. C. Gilman**, who is district director of the Puget Sound district of the Northwestern region. Mr. Elliott was born at Eddyville, Iowa, on September 29, 1865, and began railroad work as a telegraph operator on the Chicago, Rock Island & Pacific, in July, 1882. In 1884 he entered the service of the Chicago, Burlington & Quincy as an operator, and subsequently became agent and train despatcher. In 1890 he left the service of the Burlington to go with the Atchison, Topeka & Santa Fe as train despatcher; later he served in the same capacity on the Northern Pacific, and in 1904 he went with the Great Northern, with which company he remained until 1905, serving successively as train despatcher, chief despatcher, trainmaster and assistant superintendent of the Spokane and Cascade divisions. He then went with the Denver & Rio Grande



C. E. Perkins

as superintendent at Salt Lake City, Utah, where he remained for one year. In 1906 he returned to the Great Northern and for the next two years was assistant superintendent of the Dakota, Kalispell, Spokane and Willmar divisions, and from 1908 to 1910 was superintendent of the Northern and Dakota divisions and the Lake district. Mr. Elliott was then appointed assistant general superintendent of the western district, with headquarters at Spokane, Wash., and on July 20, 1913, he was promoted to general superintendent of the central district, at Great Falls, Mont., where he remained until October, 1917. He was then transferred to the Lake district, at Superior, Wis., where he remained until July of this year when he was elected president of the Spokane & Inland Empire and the United Railways.

Archibald Stuart Baldwin, chief engineer of the Illinois Central, with headquarters at Chicago, has been elected vice-president of the corporation. Mr. Baldwin was born at Winchester, Va., on September 28, 1861. He entered railway service in 1879 as a rodman on the Richmond & Allegheny, now the Chesapeake & Ohio, since which he has been consecutively from 1880 to 1882, assistant engineer and engineer of the Iron & Steel Works Association of Virginia; 1882 to 1885, draftsman and assistant engineer on the Philadelphia extension of the Baltimore & Ohio; 1885 to 1886, principal assistant engineer of the Missouri river bridge at Kansas City, Mo., for the Chicago, Milwaukee & St. Paul; 1886 to 1887, resident engineer of the Louisville, St. Louis & Texas; 1887 to 1889, assistant engineer on the Louisville & Nashville; 1891 to September, 1901, roadmaster on the same road. In September, 1901, Mr. Baldwin entered the service of the Illinois Central as principal assistant engineer and on May 1, 1903, he was appointed engineer of construction. On March 20, 1905, he was promoted to chief engineer, which position he held until his appointment as mentioned above.



A. S. Baldwin

Operating

Robert Beverley has been appointed assistant to **S. W. Heald**, superintendent of the Panama Railroad, with headquarters at Balboa Heights.

Engineering and Rolling Stock

Robert C. Falconer, whose appointment as chief engineer of the Erie, for the corporation with headquarters at New York, has already been announced, was born on March 21, 1874, at St. Mary's, Pa. He was educated in the Engineering School of the University of Wisconsin, where he received the degree of B. S. In January, 1899, he began railway work with the Pennsylvania Lines West of Pittsburgh, as transitman, and was engaged in third and fourth track work, track elevation, etc. From May, 1901, to October, 1905, he was out of railway work; during part of this time he served as contracting engineer of the American Bridge Company, and as designer and estimator for the McClintock-Marshall Construction Company. In October, 1905, he went to the Erie Railroad as assistant engineer, on surveys and construction work, and has been in the continuous service of that road ever since. In October, 1911, he was appointed division engineer of the New York division, and one year later, became principal assistant engineer of the lines east. From February, 1913, to January, 1916, he was superintendent of construction and since the latter date, served as assistant chief engineer of the same road, until his recent appointment as chief engineer for the corporation as above noted.